

**REVIEW OF SOUTHWEST GROUNDWATER CONSULTANTS
TECHNICAL MEMORANDUM REGARDING THE DECEMBER
AL EXCEEDANCE OBSERVED AT POC WELL P49-0
FLORENCE COPPER PROJECT
FLORENCE, ARIZONA**

by

**Haley & Aldrich, Inc.
Phoenix, Arizona**

for

**Curis Resources (Arizona) Inc.
Florence, Arizona**

**File No. 38706-971
27 March 2012**

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27 March 2012
File No. 38706-971

Curis Resources (Arizona) Inc.
1575 West Hunt Highway
Florence, Arizona 85132

Attention: Mr. Dan Johnson

Subject: Review of Southwest Groundwater Consultants Technical Memorandum Regarding the
December AL Exceedance Observed at POC Well P49-0
Florence Copper Project
Florence, Arizona

Dear Mr. Johnson:

Haley & Aldrich, Inc., (Haley & Aldrich) reviewed the letter and accompanying materials addressed to Ms. Nancy Rumrill of the United States Environmental Protection Agency (USEPA) from Jennings, Haug & Cunningham, L.L.P. (JH&C) on behalf of their client, Southwest Value Partners, regarding recent groundwater quality data collected from point-of-compliance (POC) wells at the Curis Resources (Arizona) Inc. (Curis Arizona) Florence Copper Project (FCP) property. The data addressed in their letter were generated and reported to the Arizona Department of Environmental Quality (ADEQ) and the USEPA in accordance with Aquifer Protection Permit No. 101704 (APP) and Underground Injection Control (UIC) Permit No. AZ396000001, respectively.

The JH&C letter asserts that the recent alert level (AL) exceedance observed at POC well P49-O is in some way related to the hydraulic control test conducted by Broken Hill Proprietary Copper Inc. (BHP Copper) in 1997-98. In support of their assertion, the JH&C letter includes a technical memorandum generated by their consulting geologist, Southwest Groundwater Consultants (SGC) describing their interpretation of the exceedance observed during the most recent quarterly sampling event at the FCP property.

Haley & Aldrich prepared this letter to provide clarification of several points raised in the JH&C letter and the SGC technical memorandum and to correct the conclusions derived by those parties. Each point raised by JH&C and SGC is discussed in detail below.

BACKGROUND

Well P49-O was drilled in May 1995 to serve as a POC well for the commercial in-situ copper recovery (ISCR) facility proposed by BHP Copper at that time. In 1996, BHP Copper applied for and received the necessary environmental permits (APP and UIC) to begin commercial scale ISCR operations at the FCP site. One requirement of the APP was that BHP Copper conduct a 90-day test to prove that hydraulic control could be maintained during the injection of the proposed lixiviant solution. BHP

Copper successfully completed the hydraulic control test on 8 February 1998. The results of the hydraulic control test were communicated to ADEQ on 6 April 1998, included as Appendix A. The test injected lixiviant solution into four injection wells and extracted pregnant leach solution from nine extraction wells. The injection and recovery wells were surrounded by a network of hydraulic control wells pumped to establish and maintain hydraulic control by inducing a groundwater flow gradient to pull surrounding groundwater into the ISCR well field.

The hydraulic control wells were surrounded by an additional ring of wells constructed to document hydraulic control. Groundwater samples collected from these wells following the BHP Copper hydraulic control test demonstrate that the migration of solutions theorized by JH&C and SGC did not, in fact, happen.

Hydraulic control was maintained throughout the test and beyond, until groundwater quality met conditions established in APP No. 101704. Groundwater quality objectives were met in December 1999; however hydraulic control was continued until ADEQ and USEPA agreed to its cessation in September 2004. The USEPA letter documenting approval of cessation, dated 18 July 2005, is included as Appendix B.

WELL P49-O WATER QUALITY HISTORY

Background water quality samples were collected monthly at POC well P49-O over a 12-month period from January to December 1996 and the well monitored on a quarterly basis since the fourth quarter of 1997, with the exception of 2009, when a previous site owner allowed monitoring to lapse. Based on the 1996 background data, the current ALs were proposed to, and accepted by, ADEQ in 2004. No AL exceedances were detected at P49-O between 2004 and December 2011. As reported to ADEQ and USEPA on 23 and 30 January 2012, respectively, AL exceedances for magnesium, sulfate, and total dissolved solids were detected at P49-O on 5 December 2011 and confirmed by samples collected on 4 January 2012. The mean concentrations of samples used to derive the ALs, mean concentrations observed in quarterly samples collected between January 1997 and November 2011, and the most recent concentrations are listed in Table 1 below.

Table 1. P49-O Indicator Parameter Concentrations				
Date	Magnesium (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	TDS (mg/L)
January – December 1996	3.7	109	0.95	485
March 1997 – September 2011	3.6	102	0.97	452
December 5, 2011	15	1,280	<0.4	2,000
January 4, 2012	15	1,320	<0.4	2,000
February 13, 2012	3.3	99.1	0.92	420
February 13, 2012 (Dup)	3.3	99	0.93	410
Alert Level	6.2	181	1.9	801

mg/L = milligrams per liter
TDS = total dissolved solids

Concentrations for each of the indicator parameters analyzed at POC well P49-O spanning the entire period of record are plotted on Figure 1. As shown on Figure 1, the recent AL exceedance observed at P49-O does not represent a trend of increasing concentrations. The exceedance observed in December 2011 and confirmed in January 2012 appears at the end of a dataset that is otherwise relatively consistent for a period of nearly 16 years.

As stated in the 23 January 2011 letter, the quarterly parameters were selected on the basis of theoretical impact by the in-situ process. All four parameters would be expected to increase significantly. Fluoride would be expected to increase by an order of magnitude or more. The current results show fluoride concentrations have decreased rather than increased, which cannot be attributed to mining impact.

It is our opinion that the abrupt change in water quality observed with this exceedance is not an indicator of solution migration from the BHP Copper test wells, but rather the result of a combination of natural variation of ore body characteristics and changes made to sampling protocols at P49-O in December 2011.

ORE BODY CHARACTERISTICS

The ore body underlying the FCP site is comprised of the naturally oxidized portion of a porphyry copper deposit that was created by supergene enrichment of a copper sulfide mineral assemblage. As the name implies, the copper sulfide mineral assemblage is comprised largely of sulfide bearing minerals that when exposed to the atmosphere, or fluctuating groundwater levels, tend to oxidize and release sulfate, which is soluble in water. At the FCP site, the oxidation process is nearly complete throughout the oxide portion of the ore body as evidenced by the general absence of sulfide minerals. The oxide portion of the ore body is underlain by the sulfide (or un-oxidized) portion of the ore body that is comprised principally of sulfide bearing minerals that are not soluble to the proposed lixiviant solution or the lixiviant solution used by BHP Copper during their hydraulic test.

The contact between the oxide and sulfide portions of the ore body is gradational in nature and does not preclude pods of sulfide minerals from occurring within the oxide zone. Core drilling performed by previous site owners to characterize the ore body documented several areas within the oxide ore body where sulfide minerals occur at varying concentrations. Sulfide minerals or their geochemical weathering by-products are believed to be the source of the relatively high sulfate concentrations detected in background samples collected at POC well M24-O. Concentrations for each of the indicator parameters analyzed at M24-O spanning the entire period of record are plotted on Figure 2.

SGC contends that the relatively high sulfate concentrations consistently observed at POC well M24-O from the time monitoring began, prior to the BHP Copper hydraulic control test, until the present are not representative of background sulfate concentrations because of their proximity to the underground workings developed by Conoco during the 1970s. In the early 1970s Conoco, a previous owner of the FCP site constructed two shafts approximately 700 feet in depth, and more than 5,000 feet of drifts to collect bulk ore samples.

In their technical memorandum, SGC contends that POC well M24-O is downgradient of the Conoco underground workings, and that this may have contributed in some way to the relatively high sulfate concentrations observed at this POC well pre-dating the BHP Copper hydraulic control test. This position is incorrect for the following reasons:

- Recent groundwater samples collected from the underground workings demonstrate that the workings are not a source of sulfate in groundwater;
- POC well M24-O is not downgradient of the Conoco underground workings and none of the figures provided by SGC show the location of the workings; and
- Conoco never injected or otherwise introduced lixiviant or similar process solutions to the underground workings.

Recent (2011) depth-specific groundwater samples collected from one of the Conoco shafts, which is in direct communication with the drifts, show sulfate concentrations below 2 milligrams per liter in groundwater within the Conoco workings. These samples are consistent with analyses performed in 1995. A copy of the 2011 laboratory report is included as Appendix C.

Given that the sulfate concentrations observed at M24-O have remained relatively consistent throughout the entire period of record and show no relationship to the underground workings created by Conoco, it is Curis Arizona's position that the sulfate concentrations measured at POC M24-O are the result of natural variation in the ore body and surrounding formation as described above. It is also Curis Arizona's position that the recent exceedance observed in nearby POC well P49-O is similarly the result of natural variation in the ore body made evident by a change in the sampling protocol made in December 2011, the only quarterly sample to ever produce a confirmed AL exceedance at P49-O.

CHANGED SAMPLING PROTOCOL

In December 2011, Curis Arizona removed the Grundfos submersible pump from well P49-O and replaced it with a QED low-flow sampling device. The low-flow sampling method is an alternate sampling method that has been recognized and approved by both the USEPA and ADEQ. As the name implies, this sampling method requires less groundwater to be pumped, both conserving groundwater and producing less fluid to be disposed of after sampling events. This sampling method is specifically permitted in the current APP for the FCP. To date, Curis Arizona has replaced 27 of 29 Grundfos submersible pumps with QED low-flow sampling devices.

The Grundfos pump, or equivalent, was used to collect samples from P49-O for the entire period of record until December 2011. Prior to December 2011, the submersible pump was used to purge a minimum of three well volumes prior to sample collection. Concentrations of indicator parameters remained relatively consistent from 1996 through September 2011. The low-flow sampling device, used for the first time during the December 2011 sampling event, only removes sufficient volume from the well to purge the sample tubing and to ensure that field parameters have stabilized, in accordance with USEPA approved low-flow sampling protocols. The intake of the low-flow sampling device was placed at a point much deeper than that of the Grundfos submersible pump previously used for sampling.

POC well P49-O was constructed primarily within the oxide zone of the FCP porphyry copper deposit, but the well screen extends between 30 and 50 feet into the deeper sulfide portion of the deposit as well. Exposure of the well screen to the deeper sulfide portion of the ore body means that the POC well is open to a source of sulfate that has the potential to dissolve from low permeability sulfide minerals into the water column within the well and create a stratified sulfate profile within the well. The sulfide zone will contribute sulfate to the water column in the period between sampling events and will result in a stratified water column sensitive to the placement of the low flow sampling intake. The earlier sampling protocol (using the submersible pump) effectively purged all high sulfate water from the POC well, replacing that water with groundwater from the most productive zones of the surrounding water-bearing formation, which also constitute the fastest groundwater flow paths to the POC well from upgradient areas.

If the recent AL exceedance observed at P49-O was indeed derived from the BHP Copper test wells, those constituents would have been manifested by increasing concentrations over time as the mixing front advanced toward well P49-O, and they would have arrived along the fastest groundwater paths, resulting in consistently increasing concentrations over time. By contrast, the exceedance noted in December 2011 is an abrupt change in concentration in a water quality record otherwise relatively consistent from January 1996 until September 2011.

On 13 February 2012, additional samples were collected from well P49-O in compliance with the monthly sampling schedule required following the exceedance observed in December 2011, and verified in January 2012. The February sample was collected using the QED low-flow sampling device, with the intake elevated 50 feet higher in the POC well relative to location of the intake for the December 2011 and January 2012 samples. Elevating the low-flow sample device intake resulted in water quality results that resemble the long term historical observations made at POC well P49-O and confirmed that the exceedance observed in December 2011 was the result of the changed sampling protocol and stratification of the water column within POC well P49-O.

As noted above, Curis Arizona has changed over 27 of 29 sampling pumps from Grundfos submersible pumps to QED low-flow devices. As a result of this change, minor water quality variations have been noted in some wells, but POC well P49-O was the only well that exceeded an AL as a result of the change. Also as noted above, the combined conditions of a well screen open to the sulfide zone, a stratified water column within POC well P49-O, and the low pump intake set deeper in the well resulted in the noted AL exceedance for sulfate at POC well P49-O.

GROUNDWATER FLOW DIRECTION

If the concentration increase observed in December 2011 did in fact represent migration of solutions from the BHP Copper test wells, a spike in concentrations of the indicator parameters would have been detected at the observation wells (OWB-3 and OWB-4) located on the western side of the BHP Copper test well block long before arriving at POC P49-O. At no point in the monitoring history of observation wells OWB-3 and OWB-4 have concentrations of the indicator parameters risen as high as those detected in P49-O in December 2011. Concentrations for each of the indicator parameters analyzed at OWB-3 and OWB-4 spanning the entire period of record are plotted on Figures 3 and 4, respectively. This fact demonstrates that the exceedance observed in P49-O in December 2011 is not the result of migration of dissolved constituents from the BHP Copper test well field.

In their technical memorandum, SGC suggests that POC well P49-O is “relatively down gradient” from the BHP test well field. However, P49-O is not directly downgradient from the BHP Copper test well field; the groundwater flow direction turns northward away from P49-O before reaching the western edge of the FCP site. SGC suggests that the oxide zone is fractured, thus groundwater will somehow flow in a direction contrary to the prevailing groundwater gradient, neglecting the fact that groundwater flow turns northward, away from POC well P49-O.

The oxide zone is extensively fractured; however, the fracturing does not drive groundwater flow in a direction contrary to the prevailing groundwater gradient. Extensive aquifer testing conducted at the FCP has demonstrated that the oxide zone is fractured so extensively that it behaves as an equivalent porous media. Consequently, it has repeatedly been demonstrated that groundwater within the oxide zone will flow in the direction of the prevailing groundwater gradient, either natural or induced.

CONCLUSION

The data cited above demonstrate that the AL exceedance observed at well P49-O on 5 December 2011 and verified on 4 January 2012 is the result of natural geochemical variation of the ore body made evident as a result of recent changes to the sampling protocol at POC well P49-O. This conclusion is supported by the following facts:

- BHP Copper maintained hydraulic control for the entire duration of their 1997-98 hydraulic control test and for an additional period that extended several years beyond the point at which groundwater was restored to closure standards.
- Samples collected from observation wells OWB-3 and OWB-4 demonstrate that no solutions migrated beyond the BHP Copper test well field either during or after the hydraulic control test.
- M24-O bears no relationship, geochemical or otherwise, to the Conoco underground workings and does in fact serve a precedent demonstrating that relatively high sulfate concentrations occur naturally at locations within the ore body for the following reasons:
 - Conoco neither injected nor otherwise used any sulfate-bearing solutions within their underground workings; and
 - Sulfate concentrations within the Conoco underground workings are non-detect as recently as 2011.
- The recent exceedance at P49-O is an abrupt change in concentration of indicator parameters otherwise relatively consistent of the past 16 years. This abrupt change is not the result of an increasing trend that might signify the approach of a mixing front resulting from migration of dissolved constituents.
- Changed sampling protocols used at P49-O for the first time on 5 December 2011 correspond directly to the first confirmed AL exceedance at POC well P49-O.
- No indicator parameter concentration spikes have been observed at monitor wells located within approximately 71 feet of the BHP Copper test wells. These observation wells would in fact be the first to show evidence of the migration of dissolved constituents theorized by JH&C and SGC.

- POC well P49-O is not directly downgradient from the BHP Copper test well field and so would have little likelihood of impact from a migration of dissolved constituents from that well field as theorized by SGC. Asserting that the extensively fractured formation will in some way facilitate cross-gradient groundwater flow is unsubstantiated speculation.

The data and information provided herewith demonstrates that the AL exceedance observed at POC well P49-O on 5 December 2011, and verified on 4 January 2012 is the result of natural geochemical variation within the ore body made evident by a change in sampling protocols.

We appreciate the opportunity to provide environmental consulting services on this project. Please do not hesitate to call if you have any questions or comments.

Sincerely yours,
HALEY & ALDRICH, INC.



Mark Nicholls
Supervising Hydrogeologist

Enclosures:

- Figure 1 – P49-O Quarterly Parameters
- Figure 2 – M24-O Quarterly Parameters
- Figure 3 – OWB-3 Indicator Parameters
- Figure 4 – OWB-4 Indicator Parameters
- Appendix A – Hydraulic Control Test Results
- Appendix B – Environmental Protection Agency Cessation Letter
- Appendix C – Laboratory Data

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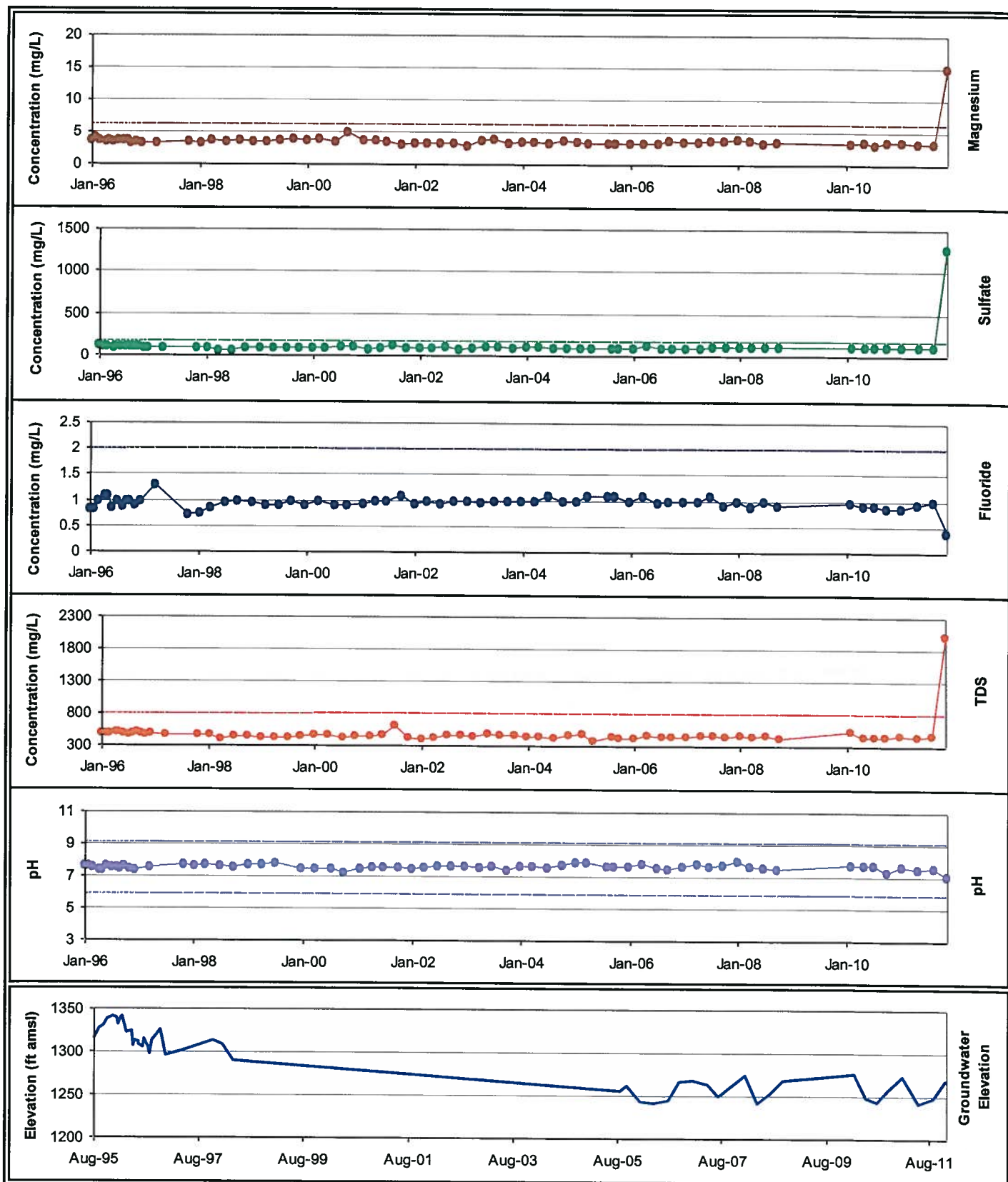


Figure 1
P49-O QUARTERLY PARAMETERS
CURIS RESOURCES (ARIZONA) INC.
FLORENCE, ARIZONA

Brown AND
Caldwell

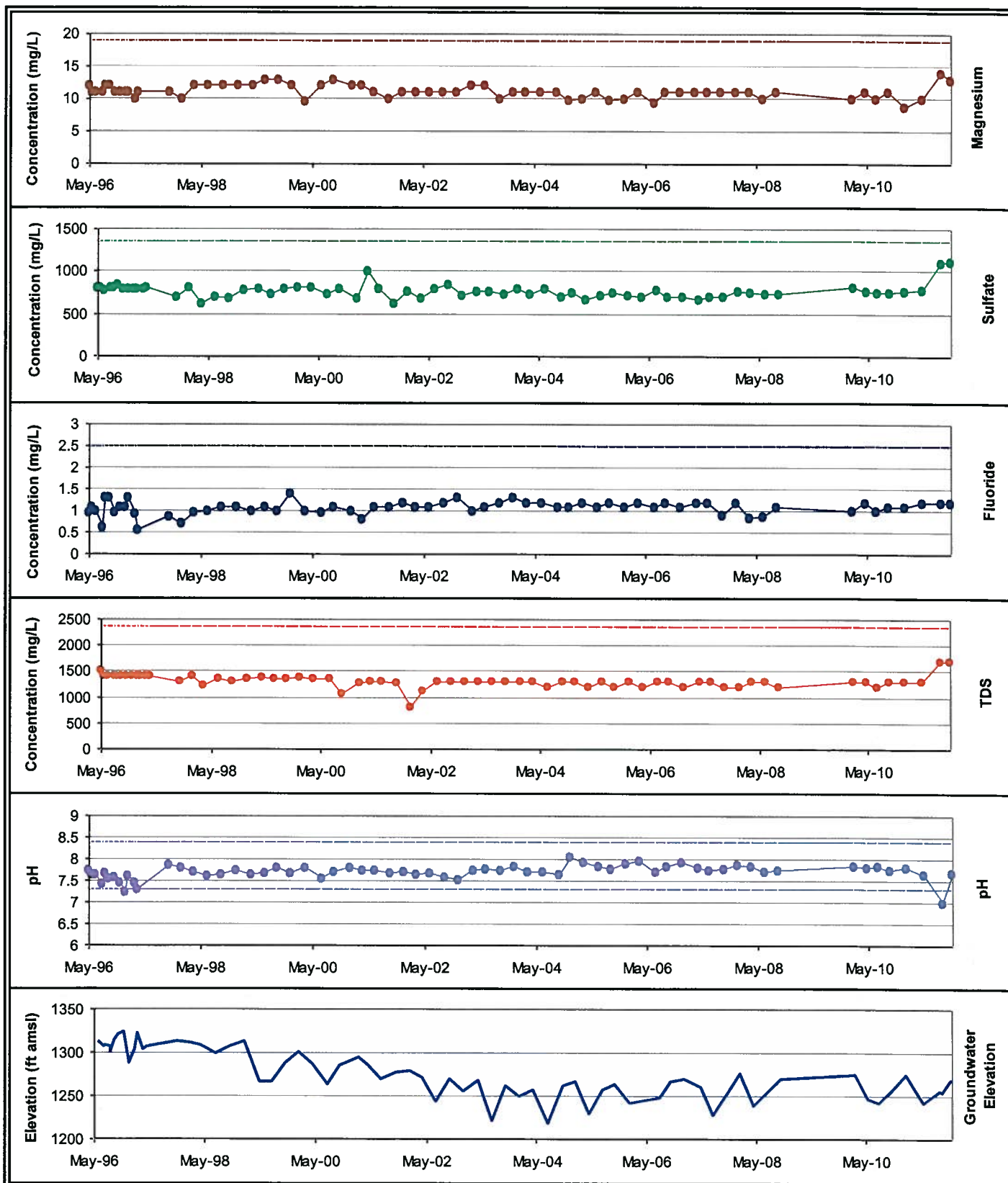


Figure 2
M24-O QUARTERLY PARAMETERS
CURIS RESOURCES (ARIZONA) INC.
FLORENCE, ARIZONA

Brown
AND
Caldwell

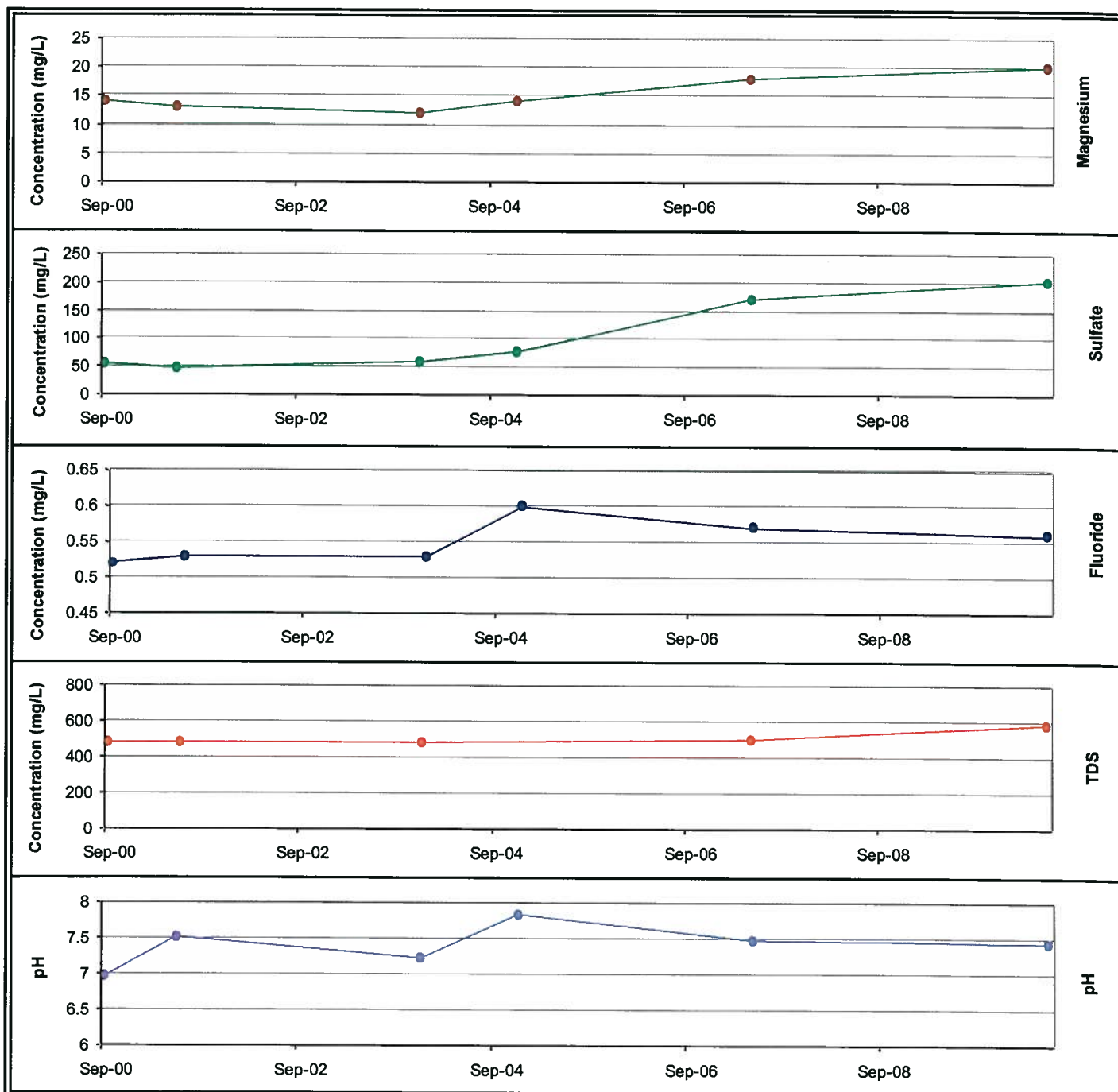


Figure 3
 OWB-3 INDICATOR PARAMETERS
 CURIS RESOURCES (ARIZONA) INC.
 FLORENCE, ARIZONA

Brown and
 Caldwell

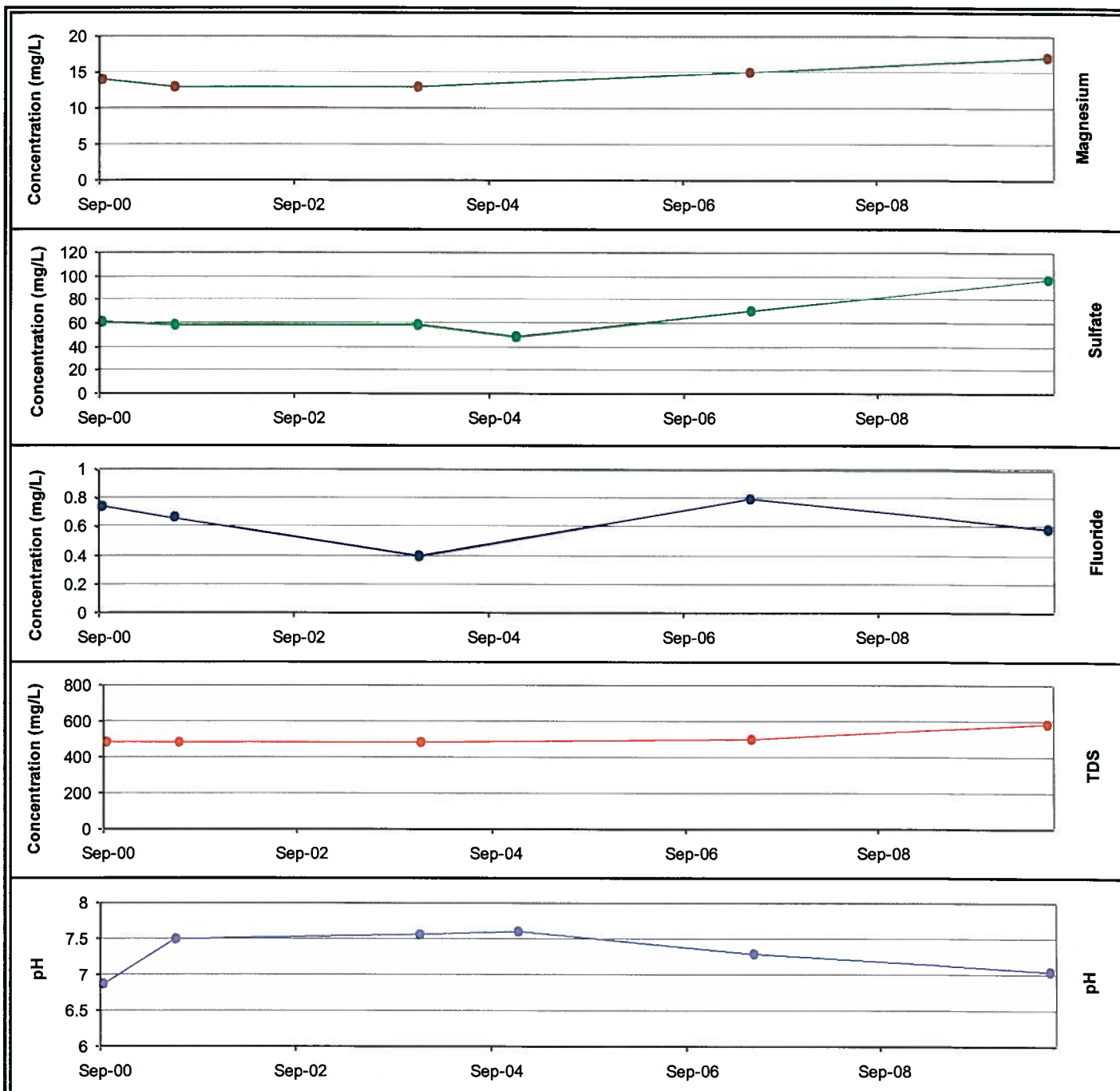


Figure 4
 OWB-4 INDICATOR PARAMETERS
 CURIS RESOURCES (ARIZONA) INC.
 FLORENCE, ARIZONA

Brown
 AND
 Caldwell

APPENDIX A

Results of BHP Copper Hydraulic Control Test Submitted to ADEQ (April 6, 1998)



WATER PERMITS

JUN 17 1998

RECEIVED

BHP Copper

6 April 1998

Ms. Julie Collins
ADEQ Compliance Officer
Arizona Department of Environmental Quality
3033 N. Central Ave.
Phoenix, AZ 85012

Dear Ms. Collins,

In order to satisfy Part II.E.1.a of Aquifer Protection Permit #101704 (permit page 7), BHP Copper is submitting data demonstrating that hydraulic control was maintained during a 90-day pre-operational period. The pre-operational compliance test was conducted from November 8, 1997 until February 10, 1998. The attached information and graphs are based on two data sets. The first set is the electrical conductivity readings measured by field technicians on daily composite samples. The second set of data includes the elevation of the water table for four pairs of pumping and observation wells. These pairs are located in the four quadrants of the compliance test area and are representative of conditions in the field area. Each pair consists of a pumping well and an observation well located 50 feet to the east or west of the pumping well. The pairs are:

<u>Quadrant</u>	<u>Pumping Well</u>	<u>Observation Well</u>
Northwest	BHP4	OWB3
Northeast	BHP3	OWB1
Southwest	BHP5	OWB4
Southeast	BHP2	OWB5

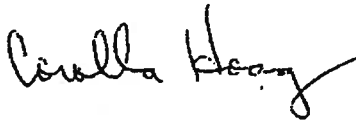
The data for electrical conductivity was measured by hand. The samples were taken by two methods. The wells labeled as BHP2, BHP3, BHP4, and BHP5 were continuously running pumping wells. The samples on these wells were made from a 24-hour composite, with each individual sample being a 0.25 gallon sample taken every six hours. These samples were blended and a portion taken for analysis. Observation wells OWB1, OWB3, OWB4, and OWB5 did not have pumps in them during the test. These wells were sampled using a sample baler with a small pump attached to guarantee a good sample. The procedure for this sampling was to turn the pump

on for five minutes and then let the sample collect for another two minutes before retrieving the baler. This sample was then analyzed. The conductivity readings were conducted on site with a YSI meter by the person doing the sampling.

The data for the water elevation levels was gathered electronically using the controllers in the well field on each individual well. The controllers upload this information continuously to the well field computer at the operator control room. The water levels of the individual wells were taken from 12 hour (12 o'clock to 12 o'clock) electronic shift files. Each well has an electronic file for each shift; these files contain readings taken every five minutes. The readings were averaged over the shift, and entered into a spread sheet.

Aberrations in the conductivity data are a result of operator error and instrument error including interference of hand-held radios used in the same room as the conductivity probe. Aberrations in the water level data are primarily a result of instrument error including maintenance problems with pressure transducers and temporary adjustments to the pumps. On OWB5, there is a period of missing or unreliable data between December 21 to December 29, 1997 caused by the malfunction of the pressure transducer in the well head. Replacements also malfunctioned, but a properly performing unit was eventually in place. If you have any questions about the data or graphs, please call me at (520) 868-5092. Thank you.

Yours sincerely,

A handwritten signature in cursive script, appearing to read "Corolla Hoag".

Ms. Corolla (Cori) Hoag

Attached: graphs showing electrical conductivity and water levels, and field measurements.



To: Corolla Hoag Sr. Geologist

CC: File

From: Michael Kline

Date: April 3, 1998

*This chart only
for our files.
C.H.*

Compliance Test Report Information

Data for Compliance test and explanation

The data consists of two sets of readings. The first is the electrical conductivity. The second is elevation of water table for observation pairs in the well field. This is grouped into pairs corresponding to the four sides of the well field. These pairs are: North West (BHP4,OWB3), North East (BHP3,OWB1), South West (BHP5,OWB4), South East (BHP2,OWB5).

The Data for electrical conductivity was taken by hand. These samples were taken two ways. The wells labeled as BHP2, BHP3, BHP4, and BHP5 were used as continuously running pumping wells. The samples on these wells are made from a twenty four hour composite, with each individual sample being a ¼ gallon sample taken every 6 hours. These samples were blended, and a portion cut for analysis. The wells labeled as OWB1, OWB3, OWB4, and OWB5 did not have pumps in them during the test. These wells were sampled using a sample baler with a small pump attached to guarantee a good sample. The procedure for this sampling was to turn the pump on for five minutes and then let the sample set for another two before retrieving the baler. This sample was then analyzed. The analysis used for electrical conductivity was performed by the person doing the sampling. This was done on sight using the YSI meter located in the control room.

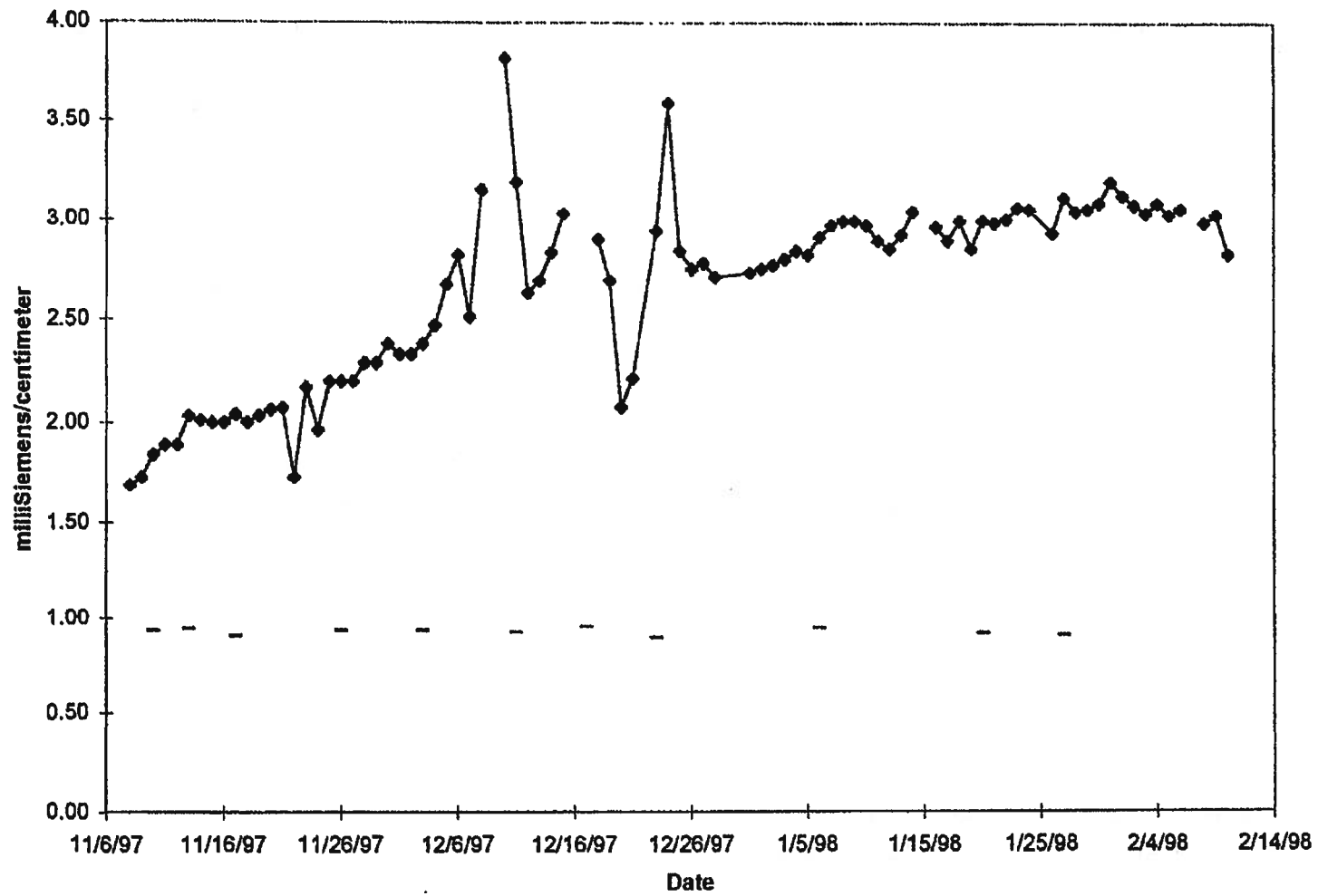
The data for the Water levels was gathered electronically using the controllers in the well field on each individual well. The controllers download this information continuously to the well field computer at the operator trailer. The water levels of the individual wells were taken from 12 hour (12 o'clock to 12 o'clock) shift files. Each well has its own individual file for each shift. These files contain readings taken every five minutes. These readings were averaged over the shift, and entered onto a spread sheet (d:\data\daily average.xls). This data was translated from depth of water table from surface to Elevation of water table using Excel.

On OWB5 there is a period of missing and corrupted data (12/21/97 to 12/29/97) this was caused by malfunction of pressure transducer in well head. A replacement was placed in within a day but this was also malfunctioning.

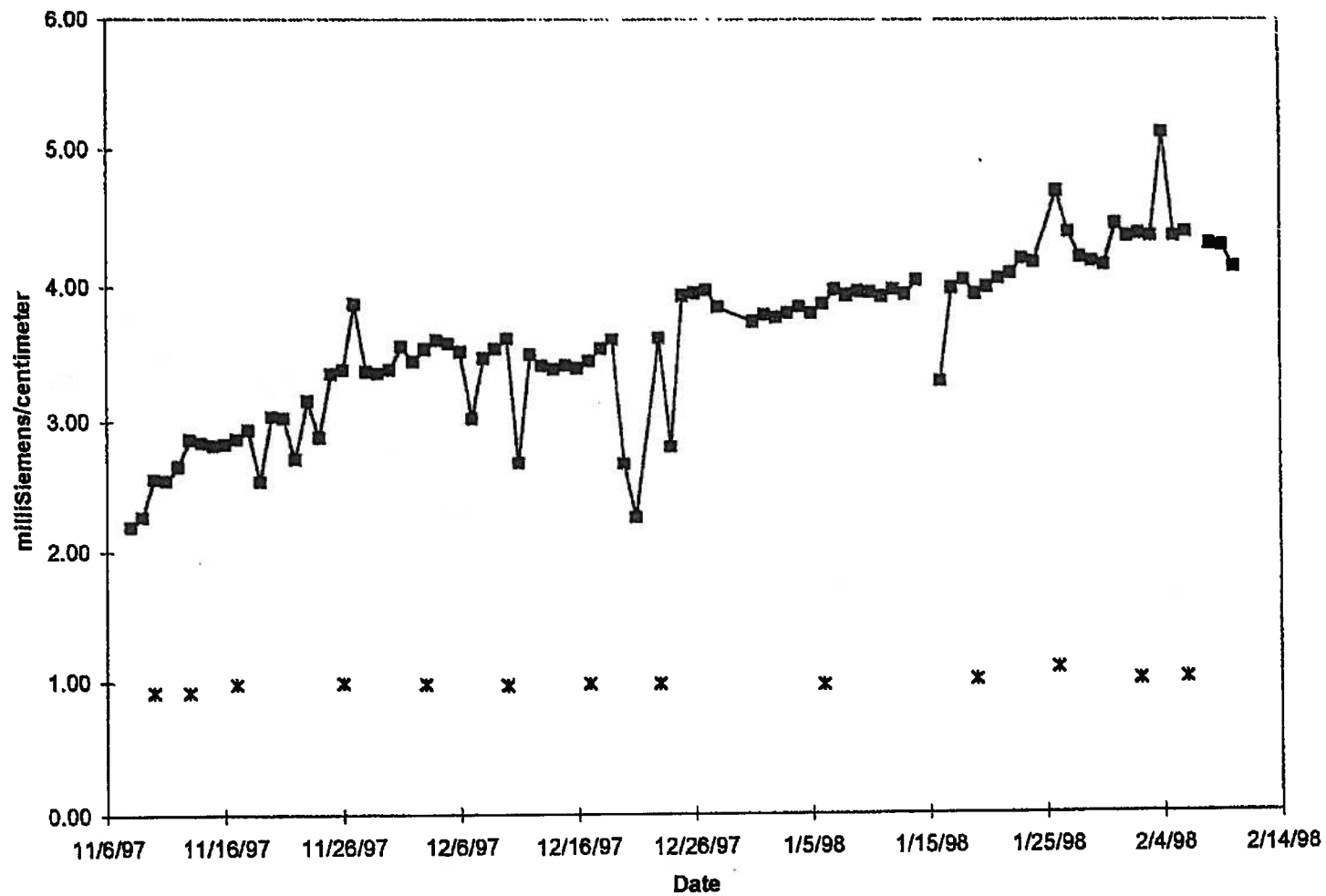
The following pages contain graphs of the electrical conductivity and the water table elevation versus time. Also included is a copy of the data for these graphs.

Michael Kline

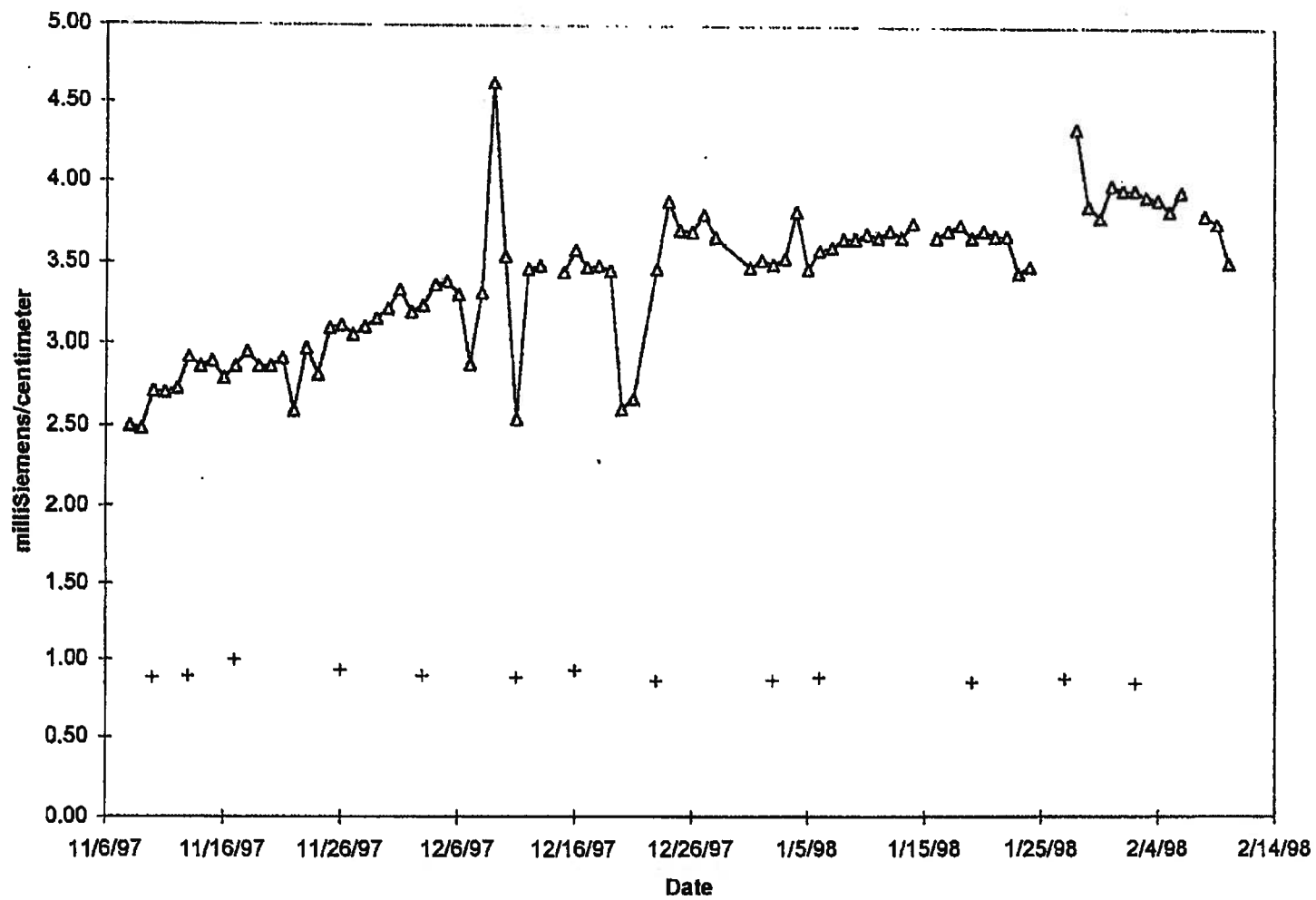
Electrical Conductivities for Observation Well Pair



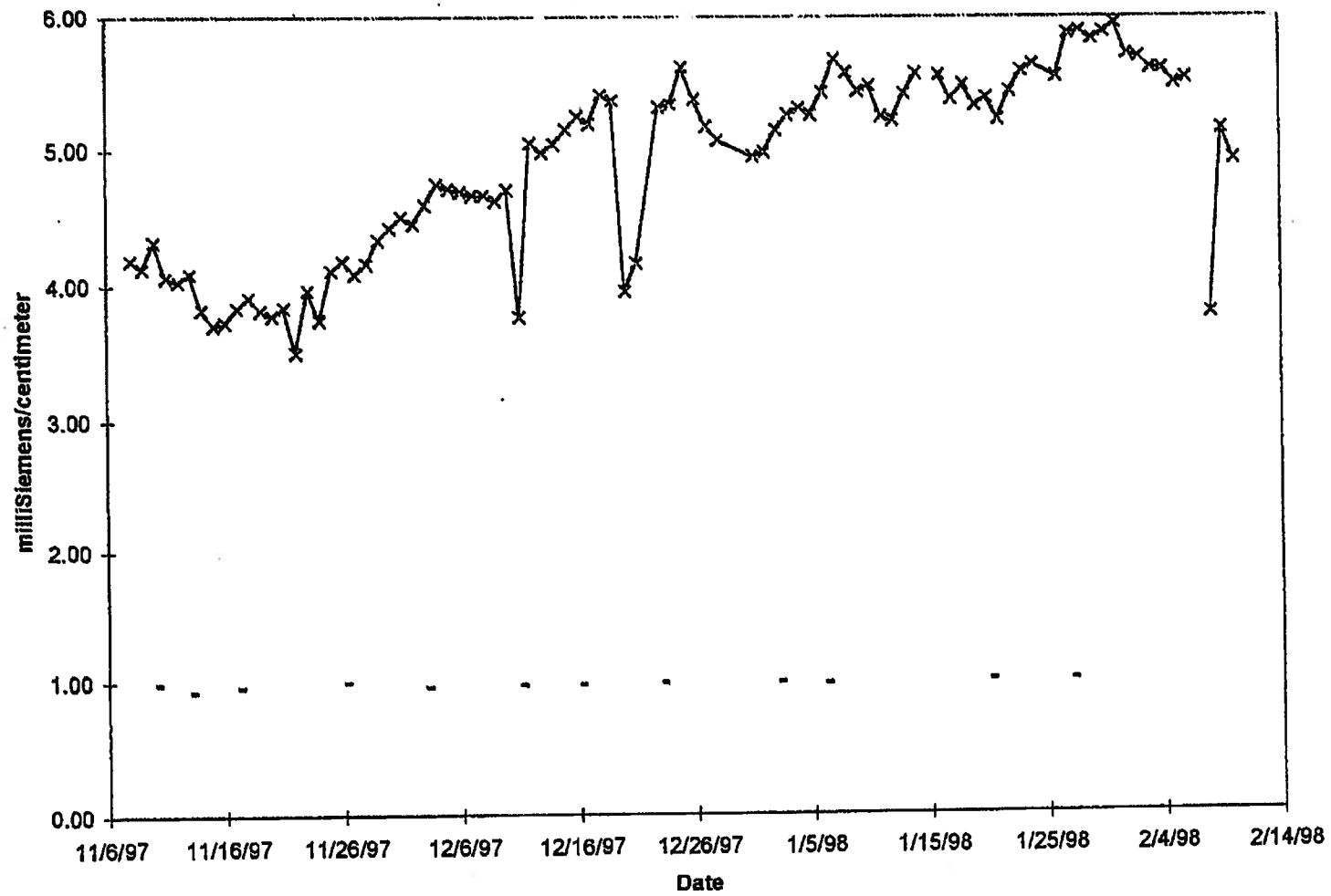
Electrical Conductivities for Observation Well Pair



Electrical Conductivities for Observation Well Pair



Electrical Conductivities for Observation Well Pair



Electrical Conductivity Readings

in milliSiemens/centimeter

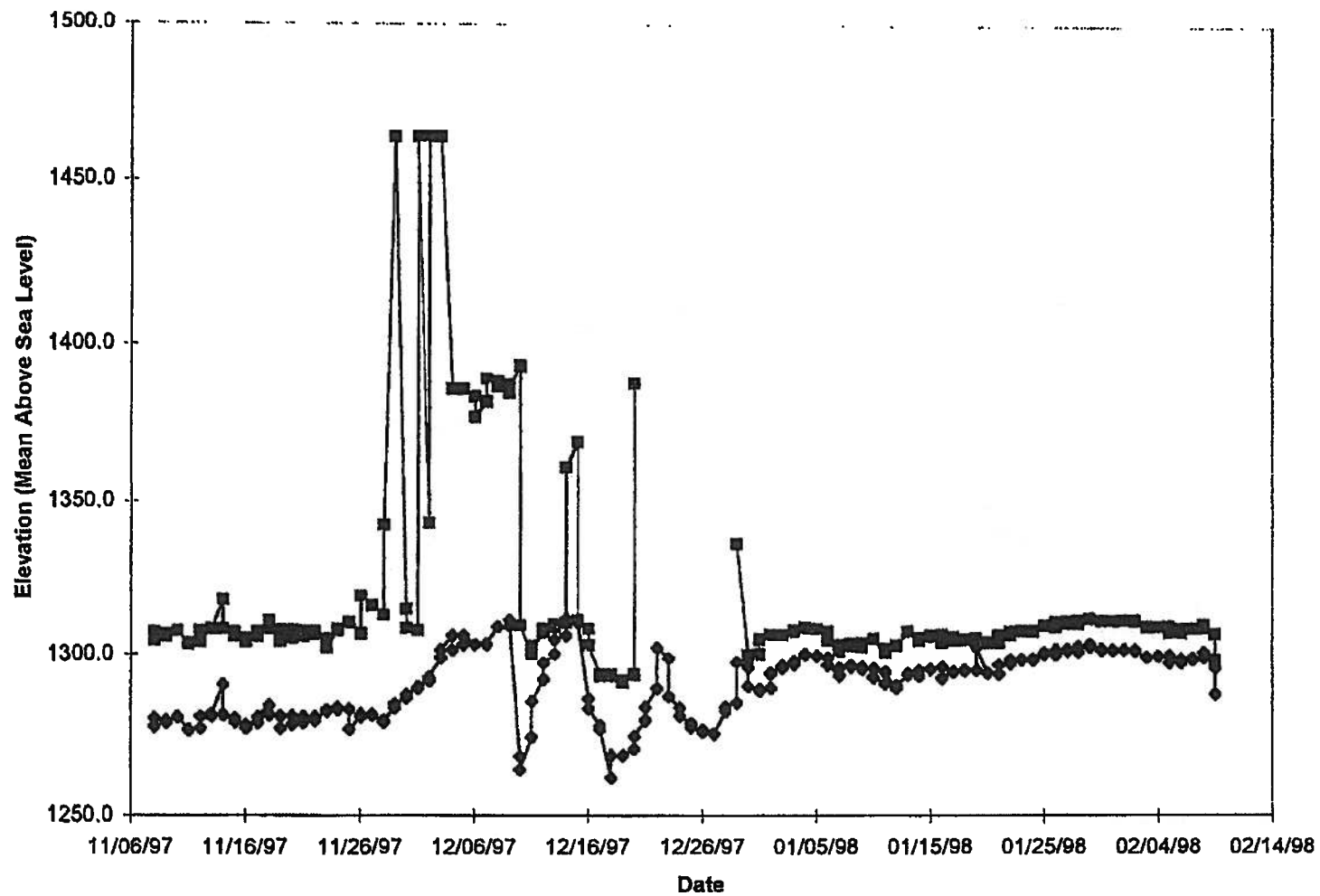
Date	BHP5	OWB1	OWB2	OWB3	OWB4	OWB5	OWB6
11/8/97	4.19		1.89				
11/9/97	4.13		1.96				
11/10/97	4.33	0.92	1.87	0.88	0.98	0.93	0.91
11/11/97	4.06		1.94				
11/12/97	4.03		1.86				
11/13/97	4.09	0.92	1.95	0.89	0.92	0.94	0.87
11/14/97	3.82		1.91				
11/15/97	3.70		2.13				
11/16/97	3.72		1.86				
11/17/97	3.83	0.98	1.88	1.00	0.95	0.90	0.92
11/18/97	3.91		1.88				
11/19/97	3.81						
11/20/97	3.77		1.93				
11/21/97	3.83		1.92				
11/22/97	3.50						
11/23/97	3.96		1.91				
11/24/97	3.74						
11/25/97	4.11						
11/26/97	4.18	0.99	1.91	0.93	0.99	0.93	0.92
11/27/97	4.08						
11/28/97	4.16						
11/29/97	4.34						
11/30/97	4.43						
12/1/97	4.51						
12/2/97	4.46						
12/3/97	4.60	0.98	1.89	0.89	0.95	0.93	0.85
12/4/97	4.75						
12/5/97	4.72		1.91				
12/6/97	4.70						
12/7/97	4.67						
12/8/97	4.67		1.98				
12/9/97	4.63						
12/10/97	4.71	0.97	1.88				
12/11/97	3.76			0.88	0.97	0.92	0.93
12/12/97	5.05		1.93				
12/13/97	4.98						
12/14/97	5.04						
12/15/97	5.15						
12/16/97	5.24			0.93	0.97		
12/17/97	5.19	0.98	1.92			0.95	0.89
12/18/97	5.40						
12/19/97	5.36		2.15				
12/20/97	3.95						
12/21/97	4.16						
12/23/97	5.31	0.98		0.86	0.98	0.89	0.89
12/24/97	5.33						
12/25/97	5.61						
12/26/97	5.37		1.87				
12/27/97	5.17						
12/28/97	5.07						

Electrical Conductivity Readings

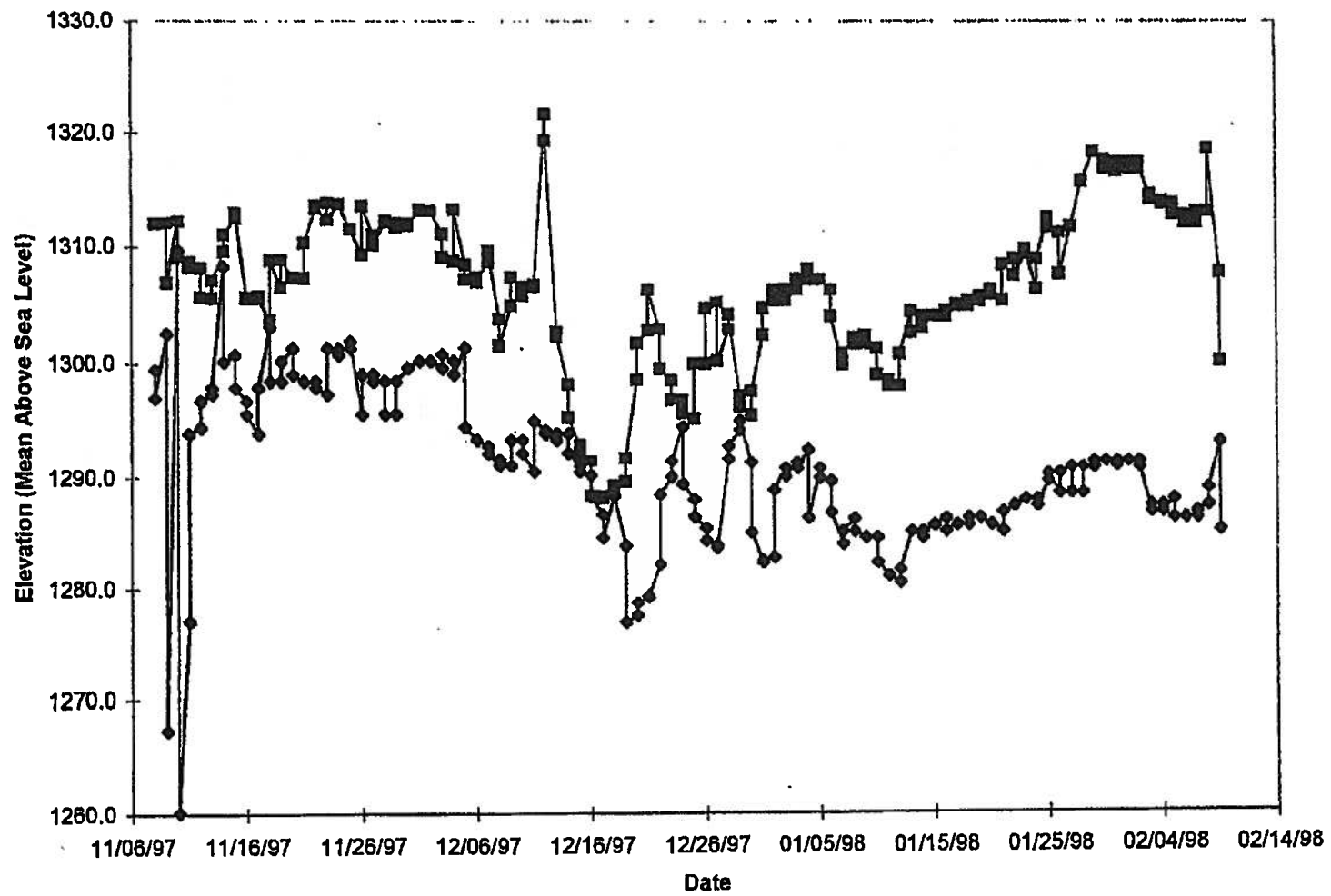
in milliSiemens/centimeter

12/31/97	4.95						
1/1/98	4.98						
1/2/98	5.14			0.86	0.98		
1/3/98	5.25						
1/4/98	5.30						
1/5/98	5.25		1.90				
1/6/98	5.42	0.97		0.88	0.97	0.94	0.90
1/7/98	5.67						
1/8/98	5.57						
1/9/98	5.43		1.88				
1/10/98	5.47						
1/11/98	5.24						
1/12/98	5.21		1.90				
1/13/98	5.41						
1/14/98	5.56						
1/15/98							
1/16/98	5.55						
1/17/98	5.37						
1/18/98	5.48						
1/19/98	5.32	1.00	1.90	0.85			
1/20/98	5.38				0.99	0.91	0.87
1/21/98	5.22						
1/22/98	5.43						
1/23/98	5.58		1.87				
1/24/98	5.63						
1/26/98	5.54	1.09	1.87				
1/27/98	5.87			0.87	0.99	0.90	
1/28/98	5.89		1.91				
1/29/98	5.83						
1/30/98	5.88						0.89
1/31/98	5.95						
2/1/98	5.71						
2/2/98	5.69	1.00	1.82	0.84			
2/3/98	5.60						
2/4/98	5.60						
2/5/98	5.49						
2/6/98	5.53	1.01					
2/7/98							
2/8/98	3.77						
2/9/98	5.15						
2/10/98	4.92						

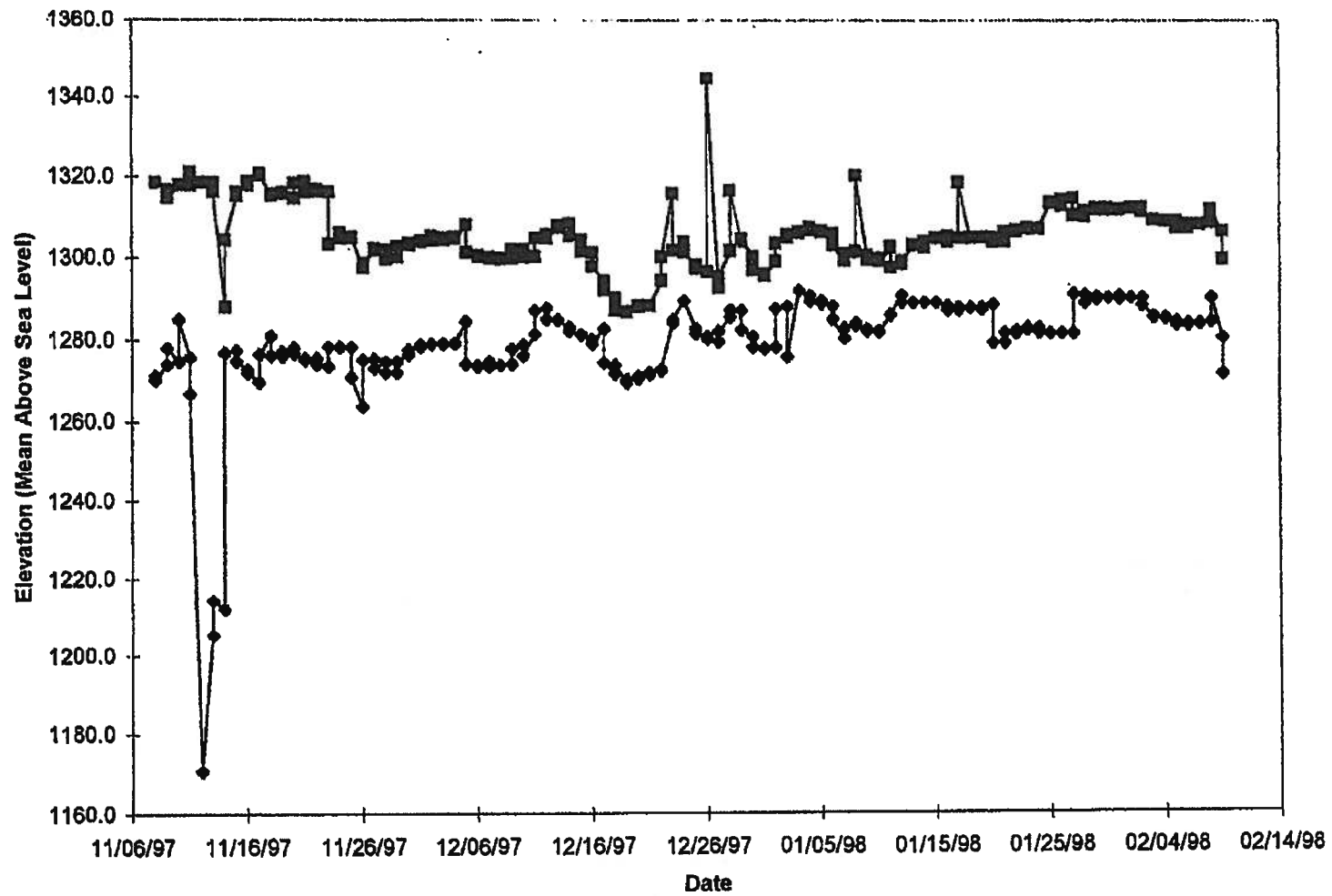
Water Level of Observation Pair



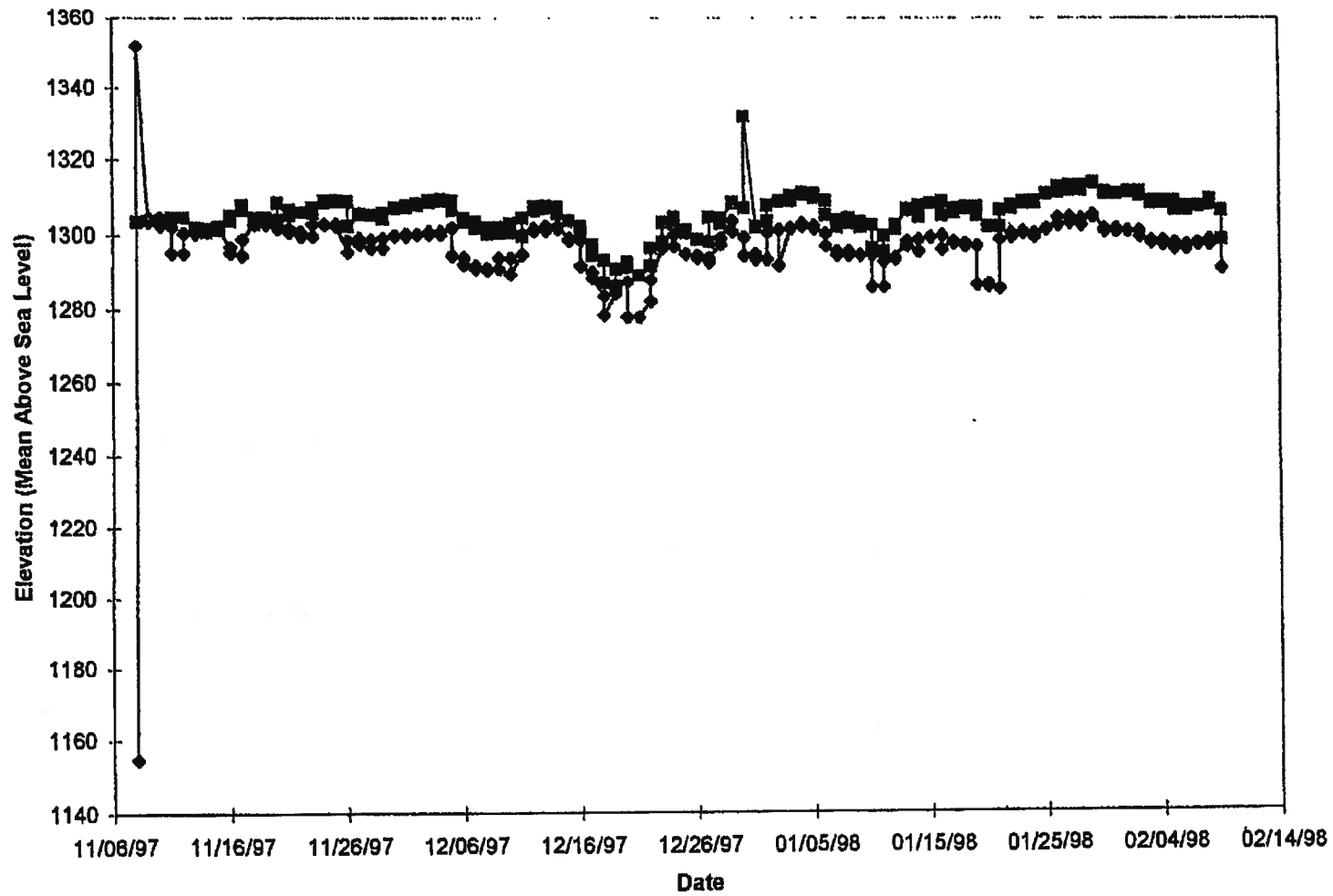
Water Level of Observation Pair



Water Level of Observation Pair



Water Level of Observation Pair



12 Hour Averages

DATE	BHP4	OWB3
11/08/97	1271.3	1318.4
11/08/97	1270.2	1318.4
11/09/97	1274.0	1316.5
11/09/97	1277.9	1314.8
11/10/97	1274.8	1317.7
11/10/97	1284.9	1317.7
11/11/97	1275.8	1317.7
11/11/97	1266.8	1320.8
11/12/97	1170.7	1318.4
11/12/97	1170.7	1318.4
11/13/97	1205.5	1318.4
11/13/97	1214.3	1316.0
11/14/97	1212.3	1287.7
11/14/97	1276.9	1304.1
11/15/97	1277.4	1314.9
11/15/97	1274.9	1315.9
11/16/97	1272.9	1317.7
11/16/97	1272.0	1318.5
11/17/97	1269.7	1320.1
11/17/97	1276.5	1320.5
11/18/97	1281.0	1315.2
11/18/97	1276.2	1315.5
11/19/97	1276.0	1315.9
11/19/97	1277.1	1315.5
11/20/97	1278.1	1314.5
11/20/97	1276.7	1318.3
11/21/97	1275.1	1316.0
11/21/97	1275.6	1318.6
11/22/97	1275.6	1316.6
11/22/97	1274.0	1316.1
11/23/97	1273.5	1316.1
11/23/97	1278.3	1303.0
11/24/97	1278.3	1305.9
11/24/97	1278.3	1304.6
11/25/97	1278.3	1304.8
11/25/97	1270.9	1304.7
11/26/97	1263.6	1297.2
11/26/97	1275.1	1298.5
11/27/97	1275.3	1301.8
11/27/97	1273.1	1301.6
11/28/97	1274.7	1301.6
11/28/97	1272.0	1299.4
11/29/97	1272.0	1300.0
11/29/97	1274.8	1302.4
11/30/97	1276.5	1303.0
11/30/97	1277.8	1303.2
12/01/97	1278.3	1303.6
12/01/97	1278.7	1303.8
12/02/97	1279.0	1304.0
12/02/97	1279.0	1305.0
12/03/97	1279.0	1304.2
12/03/97	1279.1	1304.6
12/04/97	1279.1	1304.8

12 Hour Averages

DATE	BHP4	OWB3
12/04/97	1279.2	1304.4
12/05/97	1284.4	1308.0
12/05/97	1274.0	1301.0
12/06/97	1273.8	1300.2
12/06/97	1273.3	1300.0
12/07/97	1273.3	1299.6
12/07/97	1274.8	1299.8
12/08/97	1273.8	1299.4
12/08/97	1273.8	1299.6
12/09/97	1274.1	1299.6
12/09/97	1277.7	1301.6
12/10/97	1278.7	1301.6
12/10/97	1276.1	1299.8
12/11/97	1281.4	1300.0
12/11/97	1286.9	1304.4
12/12/97	1287.4	1305.4
12/12/97	1284.9	1304.4
12/13/97	1284.8	1307.2
12/13/97	1284.8	1307.8
12/14/97	1283.0	1308.2
12/14/97	1282.0	1305.0
12/15/97	1281.1	1304.0
12/15/97	1281.2	1301.4
12/16/97	1280.0	1300.9
12/16/97	1278.9	1297.5
12/17/97	1282.5	1293.9
12/17/97	1274.3	1291.6
12/18/97	1271.5	1289.8
12/18/97	1273.8	1286.7
12/19/97	1269.5	1286.4
12/19/97	1270.1	1286.4
12/20/97	1270.4	1287.6
12/20/97	1270.9	1288.0
12/21/97	1271.4	1287.9
12/21/97	1271.8	1287.9
12/22/97	1272.3	1294.0
12/22/97	1272.7	1299.8
12/23/97	1284.0	1315.5
12/23/97	1284.6	1301.4
12/24/97	1289.2	1303.5
12/24/97	1289.2	1301.1
12/25/97	1282.6	1297.8
12/25/97	1281.4	1296.9
12/26/97	1280.7	1296.1
12/26/97	1280.0	1344.7
12/27/97	1279.4	1292.3
12/27/97	1281.9	1295.0
12/28/97	1285.3	1301.3
12/28/97	1286.9	1316.3
12/29/97	1286.8	1303.6
12/29/97	1282.3	1304.3
12/30/97	1280.5	1299.8
12/30/97	1278.0	1296.6

12 Hour Averages

DATE	BHP4	OWB3
12/31/97	1277.7	1295.4
12/31/97	1277.5	1295.2
01/01/98	1278.0	1298.7
01/01/98	1287.2	1303.1
01/02/98	1287.7	1305.3
01/02/98	1275.7	1304.6
01/03/98	1291.7	1305.6
01/03/98	1291.7	1306.1
01/04/98	1290.4	1307.3
01/04/98	1289.1	1306.3
01/05/98	1289.1	1305.9
01/05/98	1288.4	1306.3
01/06/98	1287.9	1305.7
01/06/98	1284.7	1302.7
01/07/98	1280.1	1298.9
01/07/98	1282.6	1300.5
01/08/98	1283.8	1301.1
01/08/98	1283.3	1320.1
01/09/98	1281.9	1300.1
01/09/98	1282.4	1299.1
01/10/98	1281.9	1299.5
01/10/98	1281.7	1298.7
01/11/98	1285.7	1302.3
01/11/98	1285.7	1297.3
01/12/98	1290.4	1297.9
01/12/98	1288.7	1298.7
01/13/98	1288.7	1302.5
01/13/98	1288.7	1302.7
01/14/98	1288.7	1302.1
01/14/98	1288.7	1303.5
01/15/98	1288.7	1304.4
01/15/98	1288.7	1304.3
01/16/98	1287.9	1304.9
01/16/98	1286.8	1303.5
01/17/98	1286.8	1304.3
01/17/98	1287.5	1318.3
01/18/98	1287.5	1304.3
01/18/98	1287.4	1304.4
01/19/98	1287.4	1304.4
01/19/98	1286.9	1304.5
01/20/98	1288.1	1304.5
01/20/98	1278.9	1303.4
01/21/98	1278.9	1303.5
01/21/98	1281.4	1306.0
01/22/98	1281.2	1305.9
01/22/98	1281.9	1306.5
01/23/98	1282.6	1307.1
01/23/98	1282.2	1306.7
01/24/98	1282.6	1306.7
01/24/98	1281.5	1306.9
01/25/98	1281.2	1313.1
01/25/98	1281.2	1313.3
01/26/98	1281.2	1312.5

12 Hour Averages

DATE	BHP4	OWB3
01/26/98	1281.2	1313.9
01/27/98	1281.2	1314.3
01/27/98	1290.7	1310.1
01/28/98	1290.4	1309.9
01/28/98	1288.6	1311.1
01/28/98	1289.3	1311.5
01/29/98	1290.0	1311.9
01/30/98	1289.8	1311.9
01/30/98	1289.8	1311.5
01/31/98	1289.5	1311.5
01/31/98	1290.2	1311.5
02/01/98	1289.8	1311.9
02/01/98	1289.8	1311.9
02/02/98	1289.8	1312.1
02/02/98	1287.9	1311.1
02/03/98	1285.2	1308.9
02/03/98	1284.9	1308.9
02/04/98	1284.9	1308.7
02/04/98	1284.7	1308.7
02/05/98	1283.9	1308.7
02/05/98	1283.3	1306.9
02/06/98	1283.3	1306.9
02/06/98	1283.5	1307.9
02/07/98	1283.5	1307.9
02/07/98	1283.5	1307.9
02/08/98	1284.0	1308.3
02/08/98	1289.7	1311.5
02/09/98	1280.1	1306.1
02/09/98	1271.1	1299.1

12 Hour Averages

DATE	BHP3	OWB1
11/08/97	1299.5	1312.0
11/08/97	1297.0	1312.0
11/09/97	1302.6	1312.0
11/09/97	1267.3	1306.9
11/10/97	1309.7	1312.2
11/10/97	1260.2	1309.0
11/11/97	1277.0	1308.6
11/11/97	1293.9	1308.2
11/12/97	1294.5	1308.1
11/12/97	1296.8	1305.6
11/13/97	1297.3	1305.5
11/13/97	1297.9	1307.1
11/14/97	1308.3	1309.5
11/14/97	1300.2	1311.0
11/15/97	1300.8	1312.5
11/15/97	1297.9	1312.9
11/16/97	1296.8	1305.5
11/16/97	1295.6	1305.6
11/17/97	1293.9	1305.7
11/17/97	1297.9	1305.5
11/18/97	1303.1	1303.7
11/18/97	1298.5	1308.8
11/19/97	1298.5	1306.5
11/19/97	1300.2	1308.8
11/20/97	1301.4	1307.3
11/20/97	1299.1	1307.3
11/21/97	1298.5	1307.3
11/21/97	1298.5	1310.3
11/22/97	1298.5	1313.3
11/22/97	1297.9	1313.6
11/23/97	1297.3	1313.8
11/23/97	1301.4	1312.3
11/24/97	1300.8	1313.7
11/24/97	1301.4	1313.7
11/25/97	1301.4	1311.5
11/25/97	1301.9	1311.5
11/26/97	1295.6	1309.3
11/26/97	1299.1	1313.6
11/27/97	1299.1	1311.0
11/27/97	1298.5	1310.1
11/28/97	1298.5	1312.1
11/28/97	1295.6	1312.3
11/29/97	1295.6	1312.0
11/29/97	1298.5	1311.6
11/30/97	1299.6	1311.8
11/30/97	1299.6	1311.9
12/01/97	1300.2	1313.1
12/01/97	1300.2	1313.2
12/02/97	1300.2	1313.1
12/02/97	1300.2	1313.1

12 Hour Averages

DATE	BHP3	OWB1
12/03/97	1299.6	1311.1
12/03/97	1300.8	1309.0
12/04/97	1300.2	1308.7
12/04/97	1299.1	1313.3
12/05/97	1301.4	1308.4
12/05/97	1294.5	1307.1
12/06/97	1293.3	1308.9
12/06/97	1293.3	1307.3
12/07/97	1292.7	1308.8
12/07/97	1292.1	1309.5
12/08/97	1291.0	1303.7
12/08/97	1291.6	1301.4
12/09/97	1291.0	1304.9
12/09/97	1293.3	1307.3
12/10/97	1293.3	1306.5
12/10/97	1292.1	1305.7
12/11/97	1290.4	1306.7
12/11/97	1295.0	1306.5
12/12/97	1294.1	1321.6
12/12/97	1293.8	1319.2
12/13/97	1293.3	1302.6
12/13/97	1293.8	1302.2
12/14/97	1293.8	1298.1
12/14/97	1292.1	1295.2
12/15/97	1291.0	1292.8
12/15/97	1290.4	1291.7
12/16/97	1290.1	1291.4
12/16/97	1288.1	1288.2
12/17/97	1286.5	1287.9
12/17/97	1284.4	1288.2
12/18/97	1288.1	1288.8
12/18/97	1288.3	1289.1
12/19/97	1283.7	1289.5
12/19/97	1276.9	1291.6
12/20/97	1277.5	1298.5
12/20/97	1278.6	1301.7
12/21/97	1279.1	1302.8
12/21/97	1279.3	1306.2
12/22/97	1282.1	1302.8
12/22/97	1288.3	1299.4
12/23/97	1289.9	1298.4
12/23/97	1291.4	1298.7
12/24/97	1294.4	1298.6
12/24/97	1289.3	1295.5
12/25/97	1287.9	1295.1
12/25/97	1286.3	1299.8
12/26/97	1285.3	1299.8
12/26/97	1284.1	1304.6
12/27/97	1283.8	1305.0
12/27/97	1283.5	1300.1

12 Hour Averages

DATE	BHP3	OWB1
12/28/97	1291.6	1302.8
12/28/97	1292.7	1304.1
12/29/97	1294.1	1297.1
12/29/97	1294.9	1296.1
12/30/97	1291.2	1295.3
12/30/97	1284.9	1297.4
12/31/97	1282.2	1302.3
12/31/97	1282.4	1304.6
01/01/98	1282.7	1305.3
01/01/98	1288.7	1306.2
01/02/98	1290.7	1306.2
01/02/98	1290.0	1305.3
01/03/98	1291.2	1306.2
01/03/98	1290.7	1307.1
01/04/98	1292.4	1308.0
01/04/98	1286.2	1307.1
01/05/98	1290.7	1307.1
01/05/98	1289.8	1307.1
01/06/98	1289.5	1306.2
01/06/98	1286.7	1303.9
01/07/98	1283.8	1299.8
01/07/98	1285.0	1300.7
01/08/98	1286.1	1302.1
01/08/98	1285.0	1301.6
01/09/98	1284.4	1301.6
01/09/98	1284.4	1302.2
01/10/98	1284.4	1301.1
01/10/98	1282.2	1298.9
01/11/98	1281.0	1298.4
01/11/98	1281.0	1297.9
01/12/98	1280.4	1297.9
01/12/98	1281.5	1300.7
01/13/98	1285.0	1304.3
01/13/98	1285.0	1302.5
01/14/98	1284.4	1303.0
01/14/98	1285.0	1303.9
01/15/98	1285.5	1303.9
01/15/98	1285.5	1303.9
01/16/98	1286.1	1304.3
01/16/98	1285.0	1303.9
01/17/98	1285.5	1304.8
01/17/98	1285.5	1304.9
01/18/98	1285.5	1304.8
01/18/98	1286.1	1305.2
01/19/98	1286.1	1305.2
01/19/98	1286.1	1305.6
01/20/98	1285.5	1306.2
01/20/98	1285.5	1305.7
01/21/98	1285.0	1305.3
01/21/98	1286.7	1308.3

12 Hour Averages

DATE	BHP3	OWB1
01/22/98	1287.2	1308.8
01/22/98	1287.2	1307.4
01/23/98	1287.8	1309.2
01/23/98	1287.8	1309.7
01/24/98	1287.8	1306.2
01/24/98	1287.2	1308.8
01/25/98	1289.5	1312.5
01/25/98	1290.1	1311.5
01/26/98	1288.4	1311.1
01/26/98	1290.2	1307.5
01/27/98	1290.7	1311.6
01/27/98	1288.4	1311.6
01/28/98	1288.4	1315.7
01/28/98	1290.7	1315.6
01/29/98	1290.7	1318.2
01/29/98	1291.2	1318.2
01/30/98	1291.2	1317.5
01/30/98	1291.2	1316.8
01/31/98	1291.2	1317.3
01/31/98	1290.8	1316.5
02/01/98	1291.2	1316.8
02/01/98	1291.2	1317.3
02/02/98	1291.2	1316.8
02/02/98	1290.7	1317.3
02/03/98	1286.7	1314.1
02/03/98	1287.2	1314.5
02/04/98	1287.2	1313.7
02/04/98	1286.7	1313.9
02/05/98	1287.8	1313.7
02/05/98	1286.1	1312.7
02/06/98	1286.1	1312.7
02/06/98	1286.1	1311.9
02/07/98	1286.1	1311.9
02/07/98	1286.7	1312.9
02/08/98	1287.2	1312.9
02/08/98	1288.8	1318.5
02/09/98	1292.9	1307.7
02/09/98	1285.0	1300.0

12 Hour Averages

DATE	BHP5	OWB4
11/08/97	1154.97	1303.454
11/08/97	1351.91	1303.454
11/09/97	1303.65	1303.749
11/09/97	1304.72	1303.749
11/10/97	1304.72	1303.749
11/10/97	1302.58	1303.719
11/11/97	1302.11	1304.11
11/11/97	1295.09	1304.5
11/12/97	1295.09	1304.5
11/12/97	1300.44	1304.5
11/13/97	1300.97	1301.853
11/13/97	1300.44	1301.691
11/14/97	1300.97	1301.605
11/14/97	1300.97	1300.762
11/15/97	1301.51	1301.38
11/15/97	1301.51	1302.124
11/16/97	1296.7	1303.551
11/16/97	1295.09	1304.99
11/17/97	1294.56	1306.381
11/17/97	1298.84	1307.844
11/18/97	1303.11	1302.806
11/18/97	1302.91	1304.294
11/19/97	1302.9	1304.219
11/19/97	1302.91	1304.406
11/20/97	1302.91	1303.957
11/20/97	1301.84	1308.387
11/21/97	1301.84	1305.148
11/21/97	1300.77	1306.67
11/22/97	1300.77	1305.962
11/22/97	1299.7	1306
11/23/97	1299.7	1305.655
11/23/97	1302.91	1307.153
11/24/97	1302.91	1308.567
11/24/97	1302.91	1308.884
11/25/97	1302.37	1308.9
11/25/97	1302.9	1309.031
11/26/97	1295.42	1308.625
11/26/97	1298.61	1302.342
11/27/97	1299.16	1305.61
11/27/97	1297.56	1305.483
11/28/97	1298.63	1305.163
11/28/97	1296.49	1305.096
11/29/97	1296.48	1304.237
11/29/97	1299.16	1305.734
11/30/97	1299.69	1306.977
11/30/97	1299.7	1307.049
12/01/97	1299.69	1307.17
12/01/97	1300.23	1307.595
12/02/97	1300.23	1307.8
12/02/97	1300.23	1308.03

12 Hour Averages

DATE	BHP5	OWB4
12/03/97	1300.23	1308.563
12/03/97	1300.77	1308.793
12/04/97	1300.77	1308.938
12/04/97	1300.23	1309.175
12/05/97	1301.84	1308.9
12/05/97	1294.35	1306.313
12/06/97	1293.81	1304.224
12/06/97	1292.21	1303.25
12/07/97	1291.67	1303.127
12/07/97	1290.99	1301.669
12/08/97	1290.46	1301.669
12/08/97	1290.99	1300.21
12/08/97	1290.99	1300.407
12/08/97	1293.64	1301.889
12/10/97	1293.6	1302.79
12/10/97	1289.4	1300.432
12/11/97	1294.7	1299.354
12/11/97	1300	1304.275
12/12/97	1301.06	1306.199
12/12/97	1301.59	1307.401
12/13/97	1301.06	1306.878
12/13/97	1302.12	1307.449
12/14/97	1301.59	1307.186
12/14/97	1302.12	1305.386
12/15/97	1298.94	1303.52
12/15/97	1298.41	1303.446
12/16/97	1298.41	1302.049
12/16/97	1291.52	1299.455
12/17/97	1289.93	1297.242
12/17/97	1288.34	1294.219
12/18/97	1283.53	1292.871
12/18/97	1278.27	1286.862
12/19/97	1284.1	1286.089
12/19/97	1285.16	1290.625
12/20/97	1287.28	1292.506
12/20/97	1277.74	1291.14
12/21/97	1277.74	1288.807
12/21/97	1277.74	1288.909
12/22/97	1281.98	1291.413
12/22/97	1287.81	1296.234
12/23/97	1296.29	1297.817
12/23/97	1298.41	1303.065
12/24/97	1300	1304.393
12/24/97	1296.82	1302.525
12/25/97	1294.7	1300.21
12/25/97	1294.7	1300.947
12/26/97	1294.17	1298.512
12/26/97	1293.64	1298.389
12/27/97	1292.58	1297.853
12/27/97	1293.64	1304.188

12 Hour Averages

DATE	BHP5	OWB4
01/22/98	1298.95	1306.5
01/22/98	1300.01	1307.36
01/23/98	1300.01	1308.22
01/23/98	1300.54	1307.79
01/24/98	1300.01	1307.79
01/24/98	1298.95	1308.22
01/25/98	1301.07	1310.37
01/25/98	1301.07	1310.37
01/26/98	1302.13	1310.8
01/26/98	1304.12	1312.09
01/27/98	1304.25	1312.52
01/27/98	1302.66	1311.23
01/28/98	1302.13	1311.23
01/28/98	1303.72	1312.52
01/29/98	1304.25	1312.95
01/29/98	1304.78	1313.38
01/30/98	1301.07	1310.8
01/30/98	1300.54	1310.37
01/31/98	1300.54	1310.37
01/31/98	1301.07	1310.37
02/01/98	1300.54	1310.8
02/01/98	1300.54	1310.8
02/02/98	1300.54	1310.8
02/02/98	1298.95	1309.94
02/03/98	1297.36	1308.22
02/03/98	1297.89	1307.82
02/04/98	1296.83	1307.79
02/04/98	1297.89	1308.22
02/05/98	1297.36	1308.22
02/05/98	1295.77	1306.07
02/06/98	1295.77	1306.07
02/06/98	1296.83	1306.93
02/07/98	1296.83	1306.93
02/07/98	1297.36	1306.93
02/08/98	1296.83	1307.36
02/08/98	1298.29	1308.74
02/09/98	1298.42	1305.64
02/09/98	1290.47	1297.9

12 Hour Averages

DATE	BHP2	OWB5
11/08/97	1277.4	1304.4
11/08/97	1280.0	1307.0
11/09/97	1279.3	1306.3
11/09/97	1278.7	1305.7
11/10/97	1280.3	1307.3
11/10/97	1280.5	1307.5
11/11/97	1276.2	1303.2
11/11/97	1276.5	1303.5
11/12/97	1276.9	1303.9
11/12/97	1280.5	1307.5
11/13/97	1280.8	1307.8
11/13/97	1281.2	1308.2
11/14/97	1290.6	1317.6
11/14/97	1281.0	1308.0
11/15/97	1280.0	1307.0
11/15/97	1278.8	1305.8
11/16/97	1277.9	1304.9
11/16/97	1276.9	1303.9
11/17/97	1278.6	1305.6
11/17/97	1280.3	1307.3
11/18/97	1283.9	1310.9
11/18/97	1281.0	1308.0
11/19/97	1280.8	1307.8
11/19/97	1277.0	1304.0
11/20/97	1278.1	1305.1
11/20/97	1280.8	1307.8
11/21/97	1278.6	1305.6
11/21/97	1280.5	1307.5
11/22/97	1280.3	1307.3
11/22/97	1279.3	1306.3
11/23/97	1282.4	1304.7
11/23/97	1282.2	1302.1
11/24/97	1282.7	1307.9
11/24/97	1283.2	1307.4
11/25/97	1282.7	1310.4
11/25/97	1276.7	1310.0
11/26/97	1280.5	1306.4
11/26/97	1281.2	1318.8
11/27/97	1281.0	1315.7
11/27/97	1281.2	1315.7
11/28/97	1278.8	1312.7
11/28/97	1279.6	1342.0
11/29/97	1283.2	1463.2
11/29/97	1284.3	1463.2
11/30/97	1286.3	1314.6
11/30/97	1287.2	1308.3
12/01/97	1289.4	1307.7
12/01/97	1289.9	1463.2
12/02/97	1291.8	1342.8
12/02/97	1292.7	1463.2

12 Hour Averages

DATE	BHP2	OWB5
12/28/97	1282.2	
12/28/97	1283.4	
12/29/97	1284.8	
12/29/97	1297.7	1336.0
12/30/97	1295.9	1299.6
12/30/97	1290.1	1298.7
12/31/97	1289.2	1299.9
12/31/97	1288.5	1304.8
01/01/98	1289.5	1306.1
01/01/98	1294.1	1306.1
01/02/98	1296.6	1306.1
01/02/98	1295.8	1306.1
01/03/98	1297.0	1307.0
01/03/98	1297.8	1307.7
01/04/98	1299.9	1308.6
01/04/98	1300.2	1308.2
01/05/98	1299.7	1308.2
01/05/98	1299.7	1307.9
01/06/98	1299.0	1307.2
01/06/98	1296.8	1304.5
01/07/98	1293.4	1301.0
01/07/98	1295.8	1302.9
01/08/98	1296.6	1303.3
01/08/98	1296.1	1302.6
01/09/98	1296.1	1302.4
01/09/98	1295.4	1303.6
01/10/98	1295.6	1304.9
01/10/98	1292.9	1305.0
01/11/98	1290.8	1300.6
01/11/98	1294.5	1301.8
01/12/98	1289.4	1302.9
01/12/98	1290.3	1302.9
01/13/98	1293.7	1307.1
01/13/98	1293.9	1307.4
01/14/98	1293.2	1304.5
01/14/98	1294.9	1305.2
01/15/98	1295.4	1305.6
01/15/98	1295.4	1305.9
01/16/98	1296.1	1306.3
01/16/98	1292.5	1303.8
01/17/98	1294.6	1305.4
01/17/98	1294.6	1304.4
01/18/98	1294.9	1304.7
01/18/98	1295.1	1304.5
01/19/98	1295.1	1304.5
01/19/98	1302.3	1305.1
01/20/98	1294.2	1303.7
01/20/98	1294.2	1303.7
01/21/98	1293.9	1303.7
01/21/98	1296.8	1305.9

12 Hour Averages

DATE	BHP5	OWB4
12/28/97	1297.35	1302.79
12/28/97	1298.94	1304.08
12/29/97	1303.44	1307.984
12/29/97	1300.77	1308.292
12/30/97	1299.18	1306.814
12/30/97	1294.17	1331.709
12/31/97	1293.11	1301.654
12/31/97	1294.7	1301.775
01/01/98	1293.12	1303.131
01/01/98	1300.54	1307.552
01/02/98	1301.07	1308.485
01/02/98	1291.53	1308.549
01/03/98	1301.6	1308.762
01/03/98	1301.6	1309.93
01/04/98	1302.66	1310.8
01/04/98	1302.13	1310.37
01/05/98	1302.13	1310.37
01/05/98	1301.6	1309.5
01/06/98	1300.01	1308.63
01/06/98	1296.83	1304.85
01/07/98	1294.18	1301.67
01/07/98	1295.24	1303.41
01/08/98	1295.24	1303.85
01/08/98	1294.18	1302.7
01/09/98	1294.18	1302.98
01/09/98	1294.18	1301.67
01/10/98	1294.18	1302.11
01/10/98	1285.7	1296.08
01/11/98	1285.7	1295.15
01/11/98	1292.59	1299.3
01/12/98	1293.12	1301.24
01/12/98	1293.65	1302.11
01/13/98	1297.89	1306.45
01/13/98	1296.83	1308.02
01/14/98	1295.24	1304.28
01/14/98	1298.42	1307.32
01/15/98	1298.95	1307.76
01/15/98	1298.95	1307.76
01/16/98	1299.48	1308.19
01/16/98	1295.77	1304.72
01/17/98	1297.89	1306.45
01/17/98	1297.36	1305.47
01/18/98	1297.36	1306.45
01/18/98	1296.54	1306.9
01/19/98	1296.54	1306.9
01/19/98	1286.23	1304.69
01/20/98	1286.5	1301.64
01/20/98	1285.7	1301.67
01/21/98	1285.17	1301.67
01/21/98	1298.42	1306.07

12 Hour Averages

DATE	BHP2	OWB5
12/03/97	1298.9	1463.2
12/03/97	1301.6	1463.2
12/04/97	1306.1	1385.7
12/04/97	1301.6	1385.7
12/05/97	1303.2	1385.7
12/05/97	1306.1	1385.7
12/06/97	1303.2	1383.4
12/06/97	1303.2	1377.2
12/07/97	1303.2	1381.9
12/07/97	1303.5	1389.1
12/08/97	1308.8	1388.1
12/08/97	1309.0	1386.6
12/09/97	1309.0	1384.6
12/09/97	1311.2	1387.1
12/10/97	1268.3	1393.0
12/10/97	1264.2	1309.2
12/11/97	1274.2	1300.1
12/11/97	1285.3	1302.5
12/12/97	1292.2	1307.0
12/12/97	1297.3	1308.1
12/13/97	1300.4	1308.6
12/13/97	1304.7	1309.6
12/14/97	1306.2	1310.1
12/14/97	1311.7	1361.0
12/15/97	1311.5	1369.3
12/15/97	1310.1	1311.0
12/16/97	1285.9	1308.1
12/16/97	1283.0	1302.9
12/17/97	1277.8	1293.5
12/17/97	1276.8	1293.1
12/18/97	1261.7	1293.1
12/18/97	1268.6	1293.4
12/19/97	1268.6	1291.0
12/19/97	1268.6	1291.5
12/20/97	1270.6	1293.3
12/20/97	1274.5	1387.4
12/21/97	1279.5	
12/21/97	1283.3	
12/22/97	1289.3	
12/22/97	1302.1	
12/23/97	1298.8	
12/23/97	1286.8	
12/24/97	1283.3	
12/24/97	1280.8	
12/25/97	1278.5	
12/25/97	1277.2	
12/26/97	1276.4	
12/26/97	1275.8	
12/27/97	1275.3	
12/27/97	1275.3	

12 Hour Averages

DATE	BHP2	OWB5
12/28/97	1282.2	
12/28/97	1283.4	
12/29/97	1284.8	
12/29/97	1297.7	1336.0
12/30/97	1295.9	1299.6
12/30/97	1290.1	1298.7
12/31/97	1289.2	1299.9
12/31/97	1288.5	1304.8
01/01/98	1289.5	1306.1
01/01/98	1294.1	1306.1
01/02/98	1296.6	1306.1
01/02/98	1295.8	1306.1
01/03/98	1297.0	1307.0
01/03/98	1297.8	1307.7
01/04/98	1299.9	1308.6
01/04/98	1300.2	1308.2
01/05/98	1299.7	1308.2
01/05/98	1299.7	1307.9
01/06/98	1299.0	1307.2
01/06/98	1296.8	1304.5
01/07/98	1293.4	1301.0
01/07/98	1295.8	1302.9
01/08/98	1296.6	1303.3
01/08/98	1296.1	1302.6
01/09/98	1296.1	1302.4
01/09/98	1295.4	1303.6
01/10/98	1295.6	1304.9
01/10/98	1292.9	1305.0
01/11/98	1290.8	1300.6
01/11/98	1294.5	1301.8
01/12/98	1289.4	1302.9
01/12/98	1290.3	1302.9
01/13/98	1293.7	1307.1
01/13/98	1293.9	1307.4
01/14/98	1293.2	1304.5
01/14/98	1294.9	1305.2
01/15/98	1295.4	1305.6
01/15/98	1295.4	1305.9
01/16/98	1296.1	1306.3
01/16/98	1292.5	1303.8
01/17/98	1294.6	1305.4
01/17/98	1294.6	1304.4
01/18/98	1294.9	1304.7
01/18/98	1295.1	1304.5
01/19/98	1295.1	1304.5
01/19/98	1302.3	1305.1
01/20/98	1294.2	1303.7
01/20/98	1294.2	1303.7
01/21/98	1293.9	1303.7
01/21/98	1296.8	1305.9

APPENDIX B

**USEPA Letter Documenting Approval of Cessation
(July 18, 2005)**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

WTR-9

July 18, 2005

Mr. Roger Ames
Merrill Mining, LLC
975 Johnson Ferry Road, Suite 450
Atlanta, Georgia 30342

RE: Cessation of Hydraulic Control of Mine Test Block
Florence Project, UIC permit number AZ396000001

Dear Mr. Ames:

EPA has received and reviewed the water quality results sent to us in a letter from Brown and Caldwell dated June 17, 2005, and a letter from you dated January 24, 2005. Based on the reported results, Merrill Mining may cease its rinsing operations and proceed with the closure of the wells in the in-situ test field in accordance with the Well and Corehole Abandonment Plan (Appendix C of the UIC permit). Merrill Mining shall also comply with the 30-year Post-Closure monitoring program and the ACL exceedance contingency plan established at Part II, Section F and H.2.b. of the UIC permit.

Should you have any questions, please contact me at (415) 972-3971 or via email at albright.david@epa.gov.

Sincerely,

David Albright, Manager
Ground Water Office
Water Division, EPA Region 9

cc: Eric Wilson, ADEQ
Barry Rechterovich, ADEQ
Jarrell E. Southall, Brown and Caldwell

OPTIONAL FORM 89 (7-90)

FAX TRANSMITTAL

of pages 1

To <i>Barb Sylvester</i>	From <i>Nancy Rounvill</i>
Dept./Agency	Phone # <i>415-972-3293</i>
Fax # <i>602-567-4001</i>	Fax #

NSN 7540-01-817-7388

5010-101

GENERAL SERVICES ADMINISTRATION

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APPENDIX C

2011 Laboratory Report

LABORATORY REPORT

Prepared For: Brown & Caldwell
201 E. Washington St., Ste. 500
Phoenix, AZ 85004
Attention: Mark Nicholls

Project: Florence Copper Project Conoco
Shaft Sampling

Sampled: 09/22/11
Received: 09/22/11
Issued: 10/05/11 10:51

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID

PUI1374-01
PUI1374-02
PUI1374-03
PUI1374-04
PUI1374-05

CLIENT ID

Shaft-230
Shaft-400
Shaft-500
Shaft-600
Shaft-670

MATRIX

Water
Water
Water
Water
Water

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
L3-Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Reviewed By:



TestAmerica Phoenix

Tina Paulauskas
Project Manager

Brown & Caldwell
201 E. Washington St., Ste. 500
Phoenix, AZ 85004
Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11

Received: 09/22/11

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1374-01 (Shaft-230 - Water)								
Reporting Units: mg/l								
Aluminum	EPA 200.7	11I0864	0.20	ND	1	9/23/2011	9/26/2011	
Antimony	EPA 200.7	11I0864	0.040	ND	1	9/23/2011	9/26/2011	
Arsenic	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Barium	EPA 200.7	11I0864	0.010	0.063	1	9/23/2011	9/26/2011	
Beryllium	EPA 200.7	11I0864	0.0010	ND	1	9/23/2011	9/26/2011	
Cadmium	EPA 200.7	11I0864	0.0010	ND	1	9/23/2011	9/26/2011	
Calcium	EPA 200.7	11I0864	2.0	94	1	9/23/2011	9/26/2011	
Chromium	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Cobalt	EPA 200.7	11I0864	0.040	ND	1	9/23/2011	9/26/2011	
Copper	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Iron	EPA 200.7	11I0864	0.050	17	1	9/23/2011	9/26/2011	B7
Lead	EPA 200.7	11I0864	0.015	ND	1	9/23/2011	9/26/2011	
Magnesium	EPA 200.7	11I0864	2.0	21	1	9/23/2011	9/26/2011	
Manganese	EPA 200.7	11I0864	0.010	1.3	1	9/23/2011	9/26/2011	
Mercury	EPA 245.1	11I1001	0.00020	ND	1	9/28/2011	9/28/2011	
Nickel	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Potassium	EPA 200.7	11I0864	2.0	7.3	1	9/23/2011	9/26/2011	
Selenium	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Sodium	EPA 200.7	11I0864	2.0	150	1	9/23/2011	9/26/2011	
Thallium	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Zinc	EPA 200.7	11I0864	0.050	ND	1	9/23/2011	9/26/2011	

TestAmerica Phoenix

Tina Paulauskas
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

PUI1374 <Page 2 of 25>

Brown & Caldwell
201 E. Washington St., Ste. 500
Phoenix, AZ 85004
Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1374-02 (Shaft-400 - Water)								
Reporting Units: mg/l								
Aluminum	EPA 200.7	11I0864	0.20	ND	1	9/23/2011	9/26/2011	
Antimony	EPA 200.7	11I0864	0.040	ND	1	9/23/2011	9/26/2011	
Arsenic	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Barium	EPA 200.7	11I0864	0.010	0.058	1	9/23/2011	9/26/2011	
Beryllium	EPA 200.7	11I0864	0.0010	ND	1	9/23/2011	9/26/2011	
Cadmium	EPA 200.7	11I0864	0.0010	ND	1	9/23/2011	9/26/2011	
Calcium	EPA 200.7	11I0864	2.0	90	1	9/23/2011	9/26/2011	
Chromium	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Cobalt	EPA 200.7	11I0864	0.040	ND	1	9/23/2011	9/26/2011	
Copper	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Iron	EPA 200.7	11I0864	0.050	16	1	9/23/2011	9/26/2011	B7
Lead	EPA 200.7	11I0864	0.015	ND	1	9/23/2011	9/26/2011	
Magnesium	EPA 200.7	11I0864	2.0	20	1	9/23/2011	9/26/2011	
Manganese	EPA 200.7	11I0864	0.010	1.2	1	9/23/2011	9/26/2011	
Mercury	EPA 245.1	11I0933	0.00020	0.00021	1	9/27/2011	9/27/2011	
Nickel	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Potassium	EPA 200.7	11I0864	2.0	7.0	1	9/23/2011	9/26/2011	
Selenium	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Sodium	EPA 200.7	11I0864	2.0	150	1	9/23/2011	9/26/2011	
Thallium	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Zinc	EPA 200.7	11I0864	0.050	ND	1	9/23/2011	9/26/2011	

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Brown & Caldwell
201 E. Washington St., Ste. 500
Phoenix, AZ 85004
Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11

Received: 09/22/11

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1374-03 (Shaft-500 - Water)								
Reporting Units: mg/l								
Aluminum	EPA 200.7	11I0864	0.20	ND	1	9/23/2011	9/26/2011	
Antimony	EPA 200.7	11I0864	0.040	ND	1	9/23/2011	9/26/2011	
Arsenic	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Barium	EPA 200.7	11I0864	0.010	0.056	1	9/23/2011	9/26/2011	
Beryllium	EPA 200.7	11I0864	0.0010	ND	1	9/23/2011	9/26/2011	
Cadmium	EPA 200.7	11I0864	0.0010	ND	1	9/23/2011	9/26/2011	
Calcium	EPA 200.7	11I0864	2.0	89	1	9/23/2011	9/26/2011	
Chromium	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Cobalt	EPA 200.7	11I0864	0.040	ND	1	9/23/2011	9/26/2011	
Copper	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Iron	EPA 200.7	11I0864	0.050	16	1	9/23/2011	9/26/2011	B7
Lead	EPA 200.7	11I0864	0.015	ND	1	9/23/2011	9/26/2011	
Magnesium	EPA 200.7	11I0864	2.0	20	1	9/23/2011	9/26/2011	
Manganese	EPA 200.7	11I0864	0.010	1.2	1	9/23/2011	9/26/2011	
Mercury	EPA 245.1	11I0933	0.00020	0.00048	1	9/27/2011	9/27/2011	
Nickel	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Potassium	EPA 200.7	11I0864	2.0	6.9	1	9/23/2011	9/26/2011	
Selenium	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Sodium	EPA 200.7	11I0864	2.0	140	1	9/23/2011	9/26/2011	
Thallium	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Zinc	EPA 200.7	11I0864	0.050	ND	1	9/23/2011	9/26/2011	

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Brown & Caldwell
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Phoenix, AZ 85004
Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11

Received: 09/22/11

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1374-04 (Shaft-600 - Water)								
Reporting Units: mg/l								
Aluminum	EPA 200.7	11I0864	0.20	ND	1	9/23/2011	9/26/2011	
Antimony	EPA 200.7	11I0864	0.040	ND	1	9/23/2011	9/26/2011	
Arsenic	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Barium	EPA 200.7	11I0864	0.010	0.057	1	9/23/2011	9/26/2011	
Beryllium	EPA 200.7	11I0864	0.0010	ND	1	9/23/2011	9/26/2011	
Cadmium	EPA 200.7	11I0864	0.0010	ND	1	9/23/2011	9/26/2011	
Calcium	EPA 200.7	11I0864	2.0	91	1	9/23/2011	9/26/2011	
Chromium	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Cobalt	EPA 200.7	11I0864	0.040	ND	1	9/23/2011	9/26/2011	
Copper	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Iron	EPA 200.7	11I0864	0.050	16	1	9/23/2011	9/26/2011	B7
Lead	EPA 200.7	11I0864	0.015	ND	1	9/23/2011	9/26/2011	
Magnesium	EPA 200.7	11I0864	2.0	20	1	9/23/2011	9/26/2011	
Manganese	EPA 200.7	11I0864	0.010	1.2	1	9/23/2011	9/26/2011	
Mercury	EPA 245.1	11I0933	0.00020	ND	1	9/27/2011	9/27/2011	
Nickel	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Potassium	EPA 200.7	11I0864	2.0	7.0	1	9/23/2011	9/26/2011	
Selenium	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Sodium	EPA 200.7	11I0864	2.0	150	1	9/23/2011	9/26/2011	
Thallium	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Zinc	EPA 200.7	11I0864	0.050	ND	1	9/23/2011	9/26/2011	

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Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11

Received: 09/22/11

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1374-05 (Shaft-670 - Water)								
Reporting Units: mg/l								
Aluminum	EPA 200.7	11I0864	0.20	0.62	1	9/23/2011	9/26/2011	
Antimony	EPA 200.7	11I0864	0.040	ND	1	9/23/2011	9/26/2011	
Arsenic	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Barium	EPA 200.7	11I0864	0.010	0.056	1	9/23/2011	9/26/2011	
Beryllium	EPA 200.7	11I0864	0.0010	ND	1	9/23/2011	9/26/2011	
Cadmium	EPA 200.7	11I0864	0.0010	ND	1	9/23/2011	9/26/2011	
Calcium	EPA 200.7	11I0864	2.0	88	1	9/23/2011	9/26/2011	
Chromium	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Cobalt	EPA 200.7	11I0864	0.040	ND	1	9/23/2011	9/26/2011	
Copper	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Iron	EPA 200.7	11I0864	0.050	15	1	9/23/2011	9/26/2011	B7
Lead	EPA 200.7	11I0864	0.015	ND	1	9/23/2011	9/26/2011	
Magnesium	EPA 200.7	11I0864	2.0	20	1	9/23/2011	9/26/2011	
Manganese	EPA 200.7	11I0864	0.010	1.2	1	9/23/2011	9/26/2011	
Mercury	EPA 245.1	11I0933	0.00020	ND	1	9/27/2011	9/27/2011	
Nickel	EPA 200.7	11I0864	0.010	ND	1	9/23/2011	9/26/2011	
Potassium	EPA 200.7	11I0864	2.0	6.8	1	9/23/2011	9/26/2011	
Selenium	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Sodium	EPA 200.7	11I0864	2.0	140	1	9/23/2011	9/26/2011	
Thallium	EPA 200.7	11I0864	0.10	ND	1	9/23/2011	9/26/2011	
Zinc	EPA 200.7	11I0864	0.050	ND	1	9/23/2011	9/26/2011	

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Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11

Received: 09/22/11

TOTAL METALS BY ICP/MS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1374-01 (Shaft-230 - Water)								
Reporting Units: mg/l								
Uranium	EPA 200.8	11I1027	0.0010	ND	1	9/28/2011	9/30/2011	
Sample ID: PUI1374-02 (Shaft-400 - Water)								
Reporting Units: mg/l								
Uranium	EPA 200.8	11I1027	0.0010	ND	1	9/28/2011	9/30/2011	
Sample ID: PUI1374-03 (Shaft-500 - Water)								
Reporting Units: mg/l								
Uranium	EPA 200.8	11I1027	0.0010	ND	1	9/28/2011	9/30/2011	
Sample ID: PUI1374-04RE1 (Shaft-600 - Water)								
Reporting Units: mg/l								
Uranium	EPA 200.8	11I1027	0.0020	ND	2	9/28/2011	10/4/2011	D1
Sample ID: PUI1374-05 (Shaft-670 - Water)								
Reporting Units: mg/l								
Uranium	EPA 200.8	11I1027	0.0010	ND	1	9/28/2011	9/30/2011	

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Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1374-01 (Shaft-230 - Water)								
Reporting Units: %								
Cation/Anion Balance	Calc	11I1105	NA	9.31	1	9/30/2011	9/30/2011	
Sample ID: PUI1374-01 (Shaft-230 - Water)								
Reporting Units: mg/l								
Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	350	1	9/27/2011	9/28/2011	
Bicarbonate Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	350	1	9/27/2011	9/28/2011	
Carbonate Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Chloride	EPA 300.0	11I0798	20	210	10	9/22/2011	9/22/2011	
Fluoride	EPA 300.0	11I0798	0.40	0.59	1	9/22/2011	9/22/2011	
Hydroxide Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Nitrate-N	EPA 300.0	11I0798	0.20	ND	1	9/22/2011	9/22/2011	
Sulfate	EPA 300.0	11I0798	2.0	ND	1	9/22/2011	9/22/2011	
Total Dissolved Solids	SM 2540C	11I0974	20	730	1	9/27/2011	9/27/2011	
Alkalinity, Phenolphthalein	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Sample ID: PUI1374-01 (Shaft-230 - Water)								
Reporting Units: pH Units								
pH	SM 4500H+	11I0819	1.68	7.17	1	9/22/2011	9/22/2011	H5
Temperature - °C	SM 4500H+	11I0819	NA	20.0	1	9/22/2011	9/22/2011	H5
Sample ID: PUI1374-02 (Shaft-400 - Water)								
Reporting Units: %								
Cation/Anion Balance	Calc	11I1105	NA	8.07	1	9/30/2011	9/30/2011	
Sample ID: PUI1374-02 (Shaft-400 - Water)								
Reporting Units: mg/l								
Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	350	1	9/27/2011	9/28/2011	
Bicarbonate Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	350	1	9/27/2011	9/28/2011	
Carbonate Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Chloride	EPA 300.0	11I0798	20	210	10	9/22/2011	9/22/2011	
Fluoride	EPA 300.0	11I0798	0.40	0.58	1	9/22/2011	9/22/2011	
Hydroxide Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Nitrate-N	EPA 300.0	11I0798	0.20	ND	1	9/22/2011	9/22/2011	
Sulfate	EPA 300.0	11I0798	2.0	ND	1	9/22/2011	9/22/2011	
Total Dissolved Solids	SM 2540C	11I0974	20	720	1	9/27/2011	9/27/2011	
Alkalinity, Phenolphthalein	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Sample ID: PUI1374-02 (Shaft-400 - Water)								
Reporting Units: pH Units								
pH	SM 4500H+	11I0843	1.68	6.85	1	9/23/2011	9/23/2011	H5
Temperature - °C	SM 4500H+	11I0843	NA	20.1	1	9/23/2011	9/23/2011	H5

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Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1374-03 (Shaft-500 - Water)								
Reporting Units: %								
Cation/Anion Balance	Calc	11I1105	NA	6.28	1	9/30/2011	9/30/2011	
Sample ID: PUI1374-03 (Shaft-500 - Water)								
Reporting Units: mg/l								
Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	350	1	9/27/2011	9/28/2011	
Bicarbonate Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	350	1	9/27/2011	9/28/2011	
Carbonate Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Chloride	EPA 300.0	11I0798	20	210	10	9/22/2011	9/22/2011	
Fluoride	EPA 300.0	11I0798	0.40	0.56	1	9/22/2011	9/22/2011	
Hydroxide Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Nitrate-N	EPA 300.0	11I0798	0.20	ND	1	9/22/2011	9/22/2011	
Sulfate	EPA 300.0	11I0798	2.0	ND	1	9/22/2011	9/22/2011	
Total Dissolved Solids	SM 2540C	11I0974	20	710	1	9/27/2011	9/27/2011	
Alkalinity, Phenolphthalein	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Sample ID: PUI1374-03 (Shaft-500 - Water)								
Reporting Units: pH Units								
pH	SM 4500H+	11I0843	1.68	6.87	1	9/23/2011	9/23/2011	H5
Temperature - °C	SM 4500H+	11I0843	NA	20.7	1	9/23/2011	9/23/2011	H5
Sample ID: PUI1374-04 (Shaft-600 - Water)								
Reporting Units: %								
Cation/Anion Balance	Calc	11I1105	NA	8.25	1	9/30/2011	9/30/2011	
Sample ID: PUI1374-04 (Shaft-600 - Water)								
Reporting Units: mg/l								
Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	350	1	9/27/2011	9/28/2011	
Bicarbonate Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	350	1	9/27/2011	9/28/2011	
Carbonate Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Chloride	EPA 300.0	11I0798	20	210	10	9/22/2011	9/23/2011	
Fluoride	EPA 300.0	11I0798	0.40	0.58	1	9/22/2011	9/22/2011	
Hydroxide Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Nitrate-N	EPA 300.0	11I0798	0.20	ND	1	9/22/2011	9/22/2011	
Sulfate	EPA 300.0	11I0798	2.0	ND	1	9/22/2011	9/22/2011	
Total Dissolved Solids	SM 2540C	11I0974	20	720	1	9/27/2011	9/27/2011	
Alkalinity, Phenolphthalein	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Sample ID: PUI1374-04 (Shaft-600 - Water)								
Reporting Units: pH Units								
pH	SM 4500H+	11I0843	1.68	6.87	1	9/23/2011	9/23/2011	H5
Temperature - °C	SM 4500H+	11I0843	NA	20.6	1	9/23/2011	9/23/2011	H5

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Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11

Received: 09/22/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1374-05 (Shaft-670 - Water)								
Reporting Units: %								
Cation/Anion Balance	Calc	11I1105	NA	6.13	1	9/30/2011	9/30/2011	
Sample ID: PUI1374-05 (Shaft-670 - Water)								
Reporting Units: mg/l								
Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	350	1	9/27/2011	9/28/2011	
Bicarbonate Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	350	1	9/27/2011	9/28/2011	
Carbonate Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Chloride	EPA 300.0	11I0798	20	210	10	9/22/2011	9/23/2011	
Fluoride	EPA 300.0	11I0798	0.40	0.60	1	9/22/2011	9/22/2011	
Hydroxide Alkalinity as CaCO ₃	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Nitrate-N	EPA 300.0	11I0798	0.20	ND	1	9/22/2011	9/22/2011	
Sulfate	EPA 300.0	11I0798	2.0	ND	1	9/22/2011	9/22/2011	
Total Dissolved Solids	SM 2540C	11I0974	20	730	1	9/27/2011	9/27/2011	
Alkalinity, Phenolphthalein	SM 2320B	11I0979	6.0	ND	1	9/27/2011	9/28/2011	
Sample ID: PUI1374-05 (Shaft-670 - Water)								
Reporting Units: pH Units								
pH	SM 4500H+	11I0843	1.68	6.88	1	9/23/2011	9/23/2011	H5
Temperature - °C	SM 4500H+	11I0843	NA	20.7	1	9/23/2011	9/23/2011	H5

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Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Shaft-230 (PUI1374-01) - Water					
EPA 300.0	2	09/22/2011 08:40	09/22/2011 12:33	09/22/2011 12:47	09/22/2011 18:43
SM 4500H+	1	09/22/2011 08:40	09/22/2011 12:33	09/22/2011 13:35	09/22/2011 17:54
Sample ID: Shaft-400 (PUI1374-02) - Water					
EPA 300.0	2	09/22/2011 09:00	09/22/2011 12:33	09/22/2011 12:47	09/22/2011 19:01
SM 4500H+	1	09/22/2011 09:00	09/22/2011 12:33	09/23/2011 10:40	09/23/2011 11:35
Sample ID: Shaft-500 (PUI1374-03) - Water					
EPA 300.0	2	09/22/2011 09:25	09/22/2011 12:33	09/22/2011 12:47	09/22/2011 19:20
SM 4500H+	1	09/22/2011 09:25	09/22/2011 12:33	09/23/2011 10:40	09/23/2011 11:35
Sample ID: Shaft-600 (PUI1374-04) - Water					
EPA 300.0	2	09/22/2011 09:50	09/22/2011 12:33	09/22/2011 12:47	09/22/2011 19:38
SM 4500H+	1	09/22/2011 09:50	09/22/2011 12:33	09/23/2011 10:40	09/23/2011 11:35
Sample ID: Shaft-670 (PUI1374-05) - Water					
EPA 300.0	2	09/22/2011 10:15	09/22/2011 12:33	09/22/2011 12:47	09/22/2011 19:57
SM 4500H+	1	09/22/2011 10:15	09/22/2011 12:33	09/23/2011 10:40	09/23/2011 11:35

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Phoenix, AZ 85004
Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11

Received: 09/22/11

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0864 Extracted: 09/23/11										
Blank Analyzed: 09/26/2011 (11I0864-BLK1)										
Aluminum	ND	0.20	mg/l							
Antimony	ND	0.040	mg/l							
Arsenic	ND	0.10	mg/l							
Barium	ND	0.010	mg/l							
Beryllium	ND	0.0010	mg/l							
Cadmium	ND	0.0010	mg/l							
Calcium	ND	2.0	mg/l							
Chromium	ND	0.010	mg/l							
Cobalt	ND	0.040	mg/l							
Copper	ND	0.010	mg/l							
Iron	0.144	0.050	mg/l							B7
Lead	ND	0.015	mg/l							
Magnesium	ND	2.0	mg/l							
Manganese	ND	0.010	mg/l							
Nickel	ND	0.010	mg/l							
Potassium	ND	2.0	mg/l							
Selenium	ND	0.10	mg/l							
Sodium	ND	2.0	mg/l							
Thallium	ND	0.10	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 09/26/2011 (11I0864-BS1)										
Aluminum	2.14	0.20	mg/l	2.00		107	85-115			
Antimony	1.01	0.040	mg/l	1.00		101	85-115			
Arsenic	0.986	0.10	mg/l	1.00		99	85-115			
Barium	1.03	0.010	mg/l	1.00		103	85-115			
Beryllium	1.03	0.0010	mg/l	1.00		103	85-115			
Cadmium	1.04	0.0010	mg/l	1.00		104	85-115			
Calcium	21.6	2.0	mg/l	21.0		103	85-115			
Chromium	1.02	0.010	mg/l	1.00		102	85-115			
Cobalt	1.02	0.040	mg/l	1.00		102	85-115			
Copper	0.971	0.010	mg/l	1.00		97	85-115			
Iron	1.00	0.050	mg/l	1.00		100	85-115			B7
Lead	1.02	0.015	mg/l	1.00		102	85-115			
Magnesium	21.5	2.0	mg/l	21.0		102	85-115			
Manganese	1.02	0.010	mg/l	1.00		102	85-115			

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Brown & Caldwell
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Phoenix, AZ 85004
Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling
Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0864 Extracted: 09/23/11										
LCS Analyzed: 09/26/2011 (11I0864-BS1)										
Nickel	0.994	0.010	mg/l	1.00		99	85-115			
Potassium	21.7	2.0	mg/l	20.0		109	85-115			
Selenium	0.964	0.10	mg/l	1.00		96	85-115			
Sodium	20.5	2.0	mg/l	20.0		102	85-115			
Thallium	1.04	0.10	mg/l	1.00		104	85-115			
Zinc	1.03	0.050	mg/l	1.00		103	85-115			
LCS Dup Analyzed: 09/26/2011 (11I0864-BSD1)										
Aluminum	2.10	0.20	mg/l	2.00		105	85-115	2	20	
Antimony	1.05	0.040	mg/l	1.00		105	85-115	4	20	
Arsenic	1.05	0.10	mg/l	1.00		105	85-115	6	20	
Barium	1.04	0.010	mg/l	1.00		104	85-115	1	20	
Beryllium	1.04	0.0010	mg/l	1.00		104	85-115	1	20	
Cadmium	1.06	0.0010	mg/l	1.00		106	85-115	1	20	
Calcium	21.9	2.0	mg/l	21.0		104	85-115	1	20	
Chromium	1.03	0.010	mg/l	1.00		103	85-115	1	20	
Cobalt	1.03	0.040	mg/l	1.00		103	85-115	1	20	
Copper	0.985	0.010	mg/l	1.00		99	85-115	1	20	
Iron	0.982	0.050	mg/l	1.00		98	85-115	2	20	
Lead	1.07	0.015	mg/l	1.00		107	85-115	5	20	
Magnesium	21.7	2.0	mg/l	21.0		103	85-115	0.7	20	
Manganese	1.04	0.010	mg/l	1.00		104	85-115	1	20	
Nickel	1.04	0.010	mg/l	1.00		104	85-115	5	20	
Potassium	21.2	2.0	mg/l	20.0		106	85-115	3	20	
Selenium	1.04	0.10	mg/l	1.00		104	85-115	8	20	
Sodium	20.5	2.0	mg/l	20.0		102	85-115	0.08	20	
Thallium	1.07	0.10	mg/l	1.00		107	85-115	4	20	
Zinc	1.08	0.050	mg/l	1.00		108	85-115	5	20	

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Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling
Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 11I0864 Extracted: 09/23/11

Matrix Spike Analyzed: 09/26/2011 (11I0864-MS1)

Source: PUI1355-01

Aluminum	2.11	0.20	mg/l	2.00	ND	106	70-130			
Antimony	1.04	0.040	mg/l	1.00	ND	104	70-130			
Arsenic	1.05	0.10	mg/l	1.00	ND	105	70-130			
Barium	1.05	0.010	mg/l	1.00	0.0241	102	70-130			
Beryllium	1.03	0.0010	mg/l	1.00	ND	103	70-130			
Cadmium	1.05	0.0010	mg/l	1.00	ND	105	70-130			
Calcium	50.3	2.0	mg/l	21.0	28.3	105	70-130			
Chromium	1.00	0.010	mg/l	1.00	ND	100	70-130			
Cobalt	1.03	0.040	mg/l	1.00	ND	103	70-130			
Copper	0.991	0.010	mg/l	1.00	ND	99	70-130			
Iron	1.02	0.050	mg/l	1.00	ND	102	70-130			
Lead	1.01	0.015	mg/l	1.00	ND	101	70-130			B7
Magnesium	38.4	2.0	mg/l	21.0	16.7	103	70-130			
Manganese	1.02	0.010	mg/l	1.00	ND	102	70-130			
Nickel	1.01	0.010	mg/l	1.00	ND	101	70-130			
Potassium	25.3	2.0	mg/l	20.0	3.83	107	70-130			
Selenium	1.00	0.10	mg/l	1.00	0.00640	99	70-130			
Sodium	261	2.0	mg/l	20.0	242	96	70-130			
Thallium	1.02	0.10	mg/l	1.00	ND	102	70-130			
Zinc	1.06	0.050	mg/l	1.00	ND	106	70-130			

Matrix Spike Analyzed: 09/26/2011 (11I0864-MS2)

Source: PUI1355-02

Aluminum	2.07	0.20	mg/l	2.00	ND	103	70-130			
Antimony	1.06	0.040	mg/l	1.00	ND	106	70-130			
Arsenic	1.08	0.10	mg/l	1.00	ND	108	70-130			
Barium	1.04	0.010	mg/l	1.00	0.0119	103	70-130			
Beryllium	1.04	0.0010	mg/l	1.00	ND	104	70-130			
Cadmium	1.06	0.0010	mg/l	1.00	ND	106	70-130			
Calcium	56.6	2.0	mg/l	21.0	35.2	102	70-130			
Chromium	1.02	0.010	mg/l	1.00	0.0178	100	70-130			
Cobalt	1.02	0.040	mg/l	1.00	ND	102	70-130			
Copper	1.00	0.010	mg/l	1.00	ND	100	70-130			
Iron	0.913	0.050	mg/l	1.00	ND	91	70-130			B7
Lead	1.04	0.015	mg/l	1.00	ND	104	70-130			
Magnesium	50.7	2.0	mg/l	21.0	29.7	100	70-130			
Manganese	1.03	0.010	mg/l	1.00	ND	103	70-130			

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Tina Paulauskas
Project Manager

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Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11

Received: 09/22/11

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0864 Extracted: 09/23/11										
Matrix Spike Analyzed: 09/26/2011 (11I0864-MS2)					Source: PUI1355-02					
Nickel	1.02	0.010	mg/l	1.00	ND	102	70-130			
Potassium	26.1	2.0	mg/l	20.0	5.97	101	70-130			
Selenium	1.05	0.10	mg/l	1.00	0.00858	104	70-130			
Sodium	311	2.0	mg/l	20.0	293	90	70-130			
Thallium	1.03	0.10	mg/l	1.00	ND	103	70-130			
Zinc	1.13	0.050	mg/l	1.00	0.0444	108	70-130			
Matrix Spike Dup Analyzed: 09/26/2011 (11I0864-MSD1)					Source: PUI1355-01					
Aluminum	2.09	0.20	mg/l	2.00	ND	105	70-130	0.9	20	
Antimony	1.07	0.040	mg/l	1.00	ND	107	70-130	3	20	
Arsenic	1.08	0.10	mg/l	1.00	ND	108	70-130	3	20	
Barium	1.05	0.010	mg/l	1.00	0.0241	103	70-130	0.8	20	
Beryllium	1.04	0.0010	mg/l	1.00	ND	104	70-130	1	20	
Cadmium	1.06	0.0010	mg/l	1.00	ND	106	70-130	1	20	
Calcium	50.1	2.0	mg/l	21.0	28.3	104	70-130	0.4	20	
Chromium	1.01	0.010	mg/l	1.00	ND	101	70-130	1	20	
Cobalt	1.04	0.040	mg/l	1.00	ND	104	70-130	1	20	
Copper	1.00	0.010	mg/l	1.00	ND	100	70-130	1	20	
Iron	1.01	0.050	mg/l	1.00	ND	101	70-130	0.8	20	
Lead	1.05	0.015	mg/l	1.00	ND	105	70-130	4	20	
Magnesium	38.4	2.0	mg/l	21.0	16.7	103	70-130	0.02	20	
Manganese	1.04	0.010	mg/l	1.00	ND	104	70-130	1	20	
Nickel	1.05	0.010	mg/l	1.00	ND	105	70-130	3	20	
Potassium	25.2	2.0	mg/l	20.0	3.83	107	70-130	0.3	20	
Selenium	1.04	0.10	mg/l	1.00	0.00640	103	70-130	4	20	
Sodium	262	2.0	mg/l	20.0	242	104	70-130	0.7	20	
Thallium	1.04	0.10	mg/l	1.00	ND	104	70-130	2	20	
Zinc	1.06	0.050	mg/l	1.00	ND	106	70-130	0.3	20	

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Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling
Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1110864 Extracted: 09/23/11										
Matrix Spike Dup Analyzed: 09/26/2011 (1110864-MSD2)					Source: PUI1355-02					
Aluminum	2.09	0.20	mg/l	2.00	ND	105	70-130	1	20	
Antimony	1.05	0.040	mg/l	1.00	ND	105	70-130	0.9	20	
Arsenic	1.07	0.10	mg/l	1.00	ND	107	70-130	1	20	
Barium	1.04	0.010	mg/l	1.00	0.0119	103	70-130	0.5	20	
Beryllium	1.04	0.0010	mg/l	1.00	ND	104	70-130	0.4	20	
Cadmium	1.06	0.0010	mg/l	1.00	ND	106	70-130	0.2	20	
Calcium	57.1	2.0	mg/l	21.0	35.2	104	70-130	0.9	20	
Chromium	1.02	0.010	mg/l	1.00	0.0178	100	70-130	0.2	20	
Cobalt	1.03	0.040	mg/l	1.00	ND	103	70-130	0.2	20	
Copper	1.00	0.010	mg/l	1.00	ND	100	70-130	0.2	20	
Iron	0.927	0.050	mg/l	1.00	ND	93	70-130	2	20	B7
Lead	1.02	0.015	mg/l	1.00	ND	102	70-130	2	20	
Magnesium	51.3	2.0	mg/l	21.0	29.7	103	70-130	1	20	
Manganese	1.03	0.010	mg/l	1.00	ND	103	70-130	0.4	20	
Nickel	1.01	0.010	mg/l	1.00	ND	101	70-130	0.9	20	
Potassium	26.3	2.0	mg/l	20.0	5.97	102	70-130	0.8	20	
Selenium	1.04	0.10	mg/l	1.00	0.00858	103	70-130	1	20	
Sodium	316	2.0	mg/l	20.0	293	112	70-130	1	20	
Thallium	1.02	0.10	mg/l	1.00	ND	102	70-130	1	20	
Zinc	1.12	0.050	mg/l	1.00	0.0444	107	70-130	1	20	

Batch: 1110933 Extracted: 09/27/11

Blank Analyzed: 09/27/2011 (1110933-BLK1)

Mercury	ND	0.00020	mg/l
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LCS Analyzed: 09/27/2011 (1110933-BS1)

Mercury	0.0105	0.00020	mg/l	0.0100	105	85-115
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Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling
Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0933 Extracted: 09/27/11										
LCS Dup Analyzed: 09/27/2011 (11I0933-BSD1)										
Mercury	0.0106	0.00020	mg/l	0.0100		106	85-115	0.6	20	
Matrix Spike Analyzed: 09/27/2011 (11I0933-MS1)										
Mercury	0.0110	0.00020	mg/l	0.0100	0.000127	108	70-130			
Matrix Spike Analyzed: 09/27/2011 (11I0933-MS2)										
Mercury	0.0109	0.00020	mg/l	0.0100	0.000209	106	70-130			
Matrix Spike Dup Analyzed: 09/27/2011 (11I0933-MSD1)										
Mercury	0.0110	0.00020	mg/l	0.0100	0.000127	108	70-130	0.09	20	
Matrix Spike Dup Analyzed: 09/27/2011 (11I0933-MSD2)										
Mercury	0.0107	0.00020	mg/l	0.0100	0.000209	105	70-130	2	20	
Batch: 11I1001 Extracted: 09/28/11										
Blank Analyzed: 09/28/2011 (11I1001-BLK1)										
Mercury	ND	0.00020	mg/l							
LCS Analyzed: 09/28/2011 (11I1001-BS1)										
Mercury	0.0120	0.00020	mg/l	0.0100		120	85-115			L3
LCS Dup Analyzed: 09/28/2011 (11I1001-BSD1)										
Mercury	0.0119	0.00020	mg/l	0.0100		119	85-115	1	20	L3
Matrix Spike Analyzed: 09/28/2011 (11I1001-MS1)										
Mercury	0.0119	0.00020	mg/l	0.0100	ND	119	70-130			

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Project ID: Florence Copper Project Conoco Shaft Sampling

Report Number: PUI1374

Sampled: 09/22/11

Received: 09/22/11

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1111001 Extracted: 09/28/11										
Matrix Spike Analyzed: 09/28/2011 (1111001-MS2)					Source: PUI1624-02					
Mercury	0.0116	0.00020	mg/l	0.0100	ND	116	70-130			
Matrix Spike Dup Analyzed: 09/28/2011 (1111001-MSD1)					Source: PUI1472-02					
Mercury	0.0119	0.00020	mg/l	0.0100	ND	119	70-130	0.06	20	
Matrix Spike Dup Analyzed: 09/28/2011 (1111001-MSD2)					Source: PUI1624-02					
Mercury	0.0118	0.00020	mg/l	0.0100	ND	118	70-130	2	20	

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Project ID: Florence Copper Project Conoco Shaft Sampling
Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

METHOD BLANK/QC DATA

TOTAL METALS BY ICP/MS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I1027 Extracted: 09/28/11										
Blank Analyzed: 09/30/2011 (11I1027-BLK1)										
Uranium	ND	0.0010	mg/l							
LCS Analyzed: 09/30/2011 (11I1027-BS1)										
Uranium	0.107	0.0010	mg/l	0.100		107	85-115			
LCS Dup Analyzed: 09/30/2011 (11I1027-BSD1)										
Uranium	0.107	0.0010	mg/l	0.100		107	85-115	0.4	20	
Matrix Spike Analyzed: 09/30/2011 (11I1027-MS1)										
Uranium	0.0970	0.0010	mg/l	0.100	0.000392	97	70-130			
Matrix Spike Analyzed: 09/30/2011 (11I1027-MS2)										
Uranium	0.100	0.0010	mg/l	0.100	0.00277	97	70-130			
Matrix Spike Dup Analyzed: 09/30/2011 (11I1027-MSD1)										
Uranium	0.0965	0.0010	mg/l	0.100	0.000392	96	70-130	0.5	20	
Matrix Spike Dup Analyzed: 10/02/2011 (11I1027-MSD2)										
Uranium	0.103	0.0010	mg/l	0.100	0.00277	100	70-130	3	20	

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Project ID: Florence Copper Project Conoco Shaft Sampling
Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0798 Extracted: 09/22/11										
Blank Analyzed: 09/22/2011 (11I0798-BLK1)										
Chloride	ND	2.0	mg/l							
Fluoride	ND	0.40	mg/l							
Nitrate-N	ND	0.20	mg/l							
Sulfate	ND	2.0	mg/l							
LCS Analyzed: 09/22/2011 (11I0798-BS1)										
Chloride	21.1	2.0	mg/l	20.0		106	90-110			
Fluoride	4.13	0.40	mg/l	4.00		103	90-110			
Nitrate-N	4.30	0.20	mg/l	4.00		107	90-110			
Sulfate	21.2	2.0	mg/l	20.0		106	90-110			
LCS Dup Analyzed: 09/22/2011 (11I0798-BSD1)										
Chloride	21.2	2.0	mg/l	20.0		106	90-110	0.2	15	
Fluoride	4.12	0.40	mg/l	4.00		103	90-110	0.2	20	
Nitrate-N	4.30	0.20	mg/l	4.00		107	90-110	0.07	15	
Sulfate	21.2	2.0	mg/l	20.0		106	90-110	0.2	15	
Matrix Spike Analyzed: 09/22/2011 (11I0798-MS1)										
					Source: PUI1348-01					
Chloride	42.8	2.0	mg/l	20.0	20.8	110	80-120			
Fluoride	4.61	0.40	mg/l	4.00	0.356	106	80-120			
Nitrate-N	4.80	0.20	mg/l	4.00	0.320	112	80-120			
Sulfate	86.5	2.0	mg/l	20.0	67.6	95	80-120			
Matrix Spike Dup Analyzed: 09/22/2011 (11I0798-MSD1)										
					Source: PUI1348-01					
Chloride	42.8	2.0	mg/l	20.0	20.8	110	80-120	0.2	15	
Fluoride	4.63	0.40	mg/l	4.00	0.356	107	80-120	0.4	20	
Nitrate-N	4.82	0.20	mg/l	4.00	0.320	112	80-120	0.3	15	
Sulfate	86.5	2.0	mg/l	20.0	67.6	95	80-120	0.005	15	

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Project Manager

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Brown & Caldwell
201 E. Washington St., Ste. 500
Phoenix, AZ 85004
Attention: Mark Nicholls

Project ID: Florence Copper Project Conoco Shaft Sampling
Report Number: PUI1374

Sampled: 09/22/11
Received: 09/22/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0819 Extracted: 09/22/11										
Duplicate Analyzed: 09/22/2011 (11I0819-DUP1)										
pH	8.10	1.68	pH Units		8.10			0	10	H5
Duplicate Analyzed: 09/22/2011 (11I0819-DUP2)										
pH	9.65	1.68	pH Units		9.65			0	10	H5
Reference Analyzed: 09/22/2011 (11I0819-SRM1)										
pH	7.04	1.68	pH Units	7.00		101	99-101			
Reference Analyzed: 09/22/2011 (11I0819-SRM2)										
pH	7.05	1.68	pH Units	7.00		101	99-101			
Batch: 11I0843 Extracted: 09/23/11										
Duplicate Analyzed: 09/23/2011 (11I0843-DUP1)										
pH	6.85	1.68	pH Units		6.85			0	10	H5
Duplicate Analyzed: 09/23/2011 (11I0843-DUP2)										
pH	8.16	1.68	pH Units		8.16			0	10	H5
Reference Analyzed: 09/23/2011 (11I0843-SRM1)										
pH	7.02	1.68	pH Units	7.00		100	99-101			
Reference Analyzed: 09/23/2011 (11I0843-SRM2)										
pH	7.03	1.68	pH Units	7.00		100	99-101			
Batch: 11I0974 Extracted: 09/27/11										
Blank Analyzed: 09/27/2011 (11I0974-BLK1)										
Total Dissolved Solids	ND	20	mg/l							

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Received: 09/22/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0974 Extracted: 09/27/11										
LCS Analyzed: 09/27/2011 (11I0974-BS1)										
Total Dissolved Solids	956	20	mg/l	1000		96	80-115			
LCS Dup Analyzed: 09/27/2011 (11I0974-BSD1)										
Total Dissolved Solids	954	20	mg/l	1000		95	80-115	0.2	10	
Duplicate Analyzed: 09/27/2011 (11I0974-DUP1)										
Total Dissolved Solids	346	20	mg/l		Source: PUI1323-01 358			3	10	
Duplicate Analyzed: 09/27/2011 (11I0974-DUP2)										
Total Dissolved Solids	634	20	mg/l		Source: PUI1355-04 634			0	10	
Batch: 11I0979 Extracted: 09/27/11										
Blank Analyzed: 09/28/2011 (11I0979-BLK1)										
Alkalinity as CaCO ₃	ND	6.0	mg/l							
Bicarbonate Alkalinity as CaCO ₃	ND	6.0	mg/l							
Carbonate Alkalinity as CaCO ₃	ND	6.0	mg/l							
Hydroxide Alkalinity as CaCO ₃	ND	6.0	mg/l							
Alkalinity, Phenolphthalein	ND	6.0	mg/l							
LCS Analyzed: 09/28/2011 (11I0979-BS1)										
Alkalinity as CaCO ₃	250	6.0	mg/l	250		100	90-110			
LCS Dup Analyzed: 09/28/2011 (11I0979-BSD1)										
Alkalinity as CaCO ₃	250	6.0	mg/l	250		100	90-110	0.1	20	
Duplicate Analyzed: 09/28/2011 (11I0979-DUP1)										
Alkalinity as CaCO ₃	460	6.0	mg/l		Source: PUI1525-01 450			2	20	
Bicarbonate Alkalinity as CaCO ₃	460	6.0	mg/l		450			2	20	
Carbonate Alkalinity as CaCO ₃	ND	6.0	mg/l		ND				20	
Hydroxide Alkalinity as CaCO ₃	ND	6.0	mg/l		ND				20	
Alkalinity, Phenolphthalein	ND	6.0	mg/l		ND				20	

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Sampled: 09/22/11
Received: 09/22/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0979 Extracted: 09/27/11									
Duplicate Analyzed: 09/28/2011 (11I0979-DUP2)					Source: PUI1559-01				
Alkalinity as CaCO ₃	75.6	6.0	mg/l		75.5		0.08	20	
Bicarbonate Alkalinity as CaCO ₃	75.6	6.0	mg/l		75.5		0.08	20	
Carbonate Alkalinity as CaCO ₃	ND	6.0	mg/l		ND			20	
Hydroxide Alkalinity as CaCO ₃	ND	6.0	mg/l		ND			20	
Alkalinity, Phenolphthalein	ND	6.0	mg/l		ND			20	

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Sampled: 09/22/11

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DATA QUALIFIERS AND DEFINITIONS

- B7** Target analyte detected in method blank at or above method reporting limit. Concentration found in the sample was 10 times above the concentration found in the method blank.
- D1** Sample required dilution due to matrix.
- H5** Field parameter with a holding time of 15 minutes.
- L3** The associated blank spike recovery was above method acceptance limits.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

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Sampled: 09/22/11

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Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
Calc	Water		
EPA 200.7	Water		X
EPA 200.8	Water		X
EPA 245.1	Water		X
EPA 300.0	Water		X
SM 2320B	Water		X
SM 2540C	Water		X
SM 4500H+	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

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P4I1374

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Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

2.5%

